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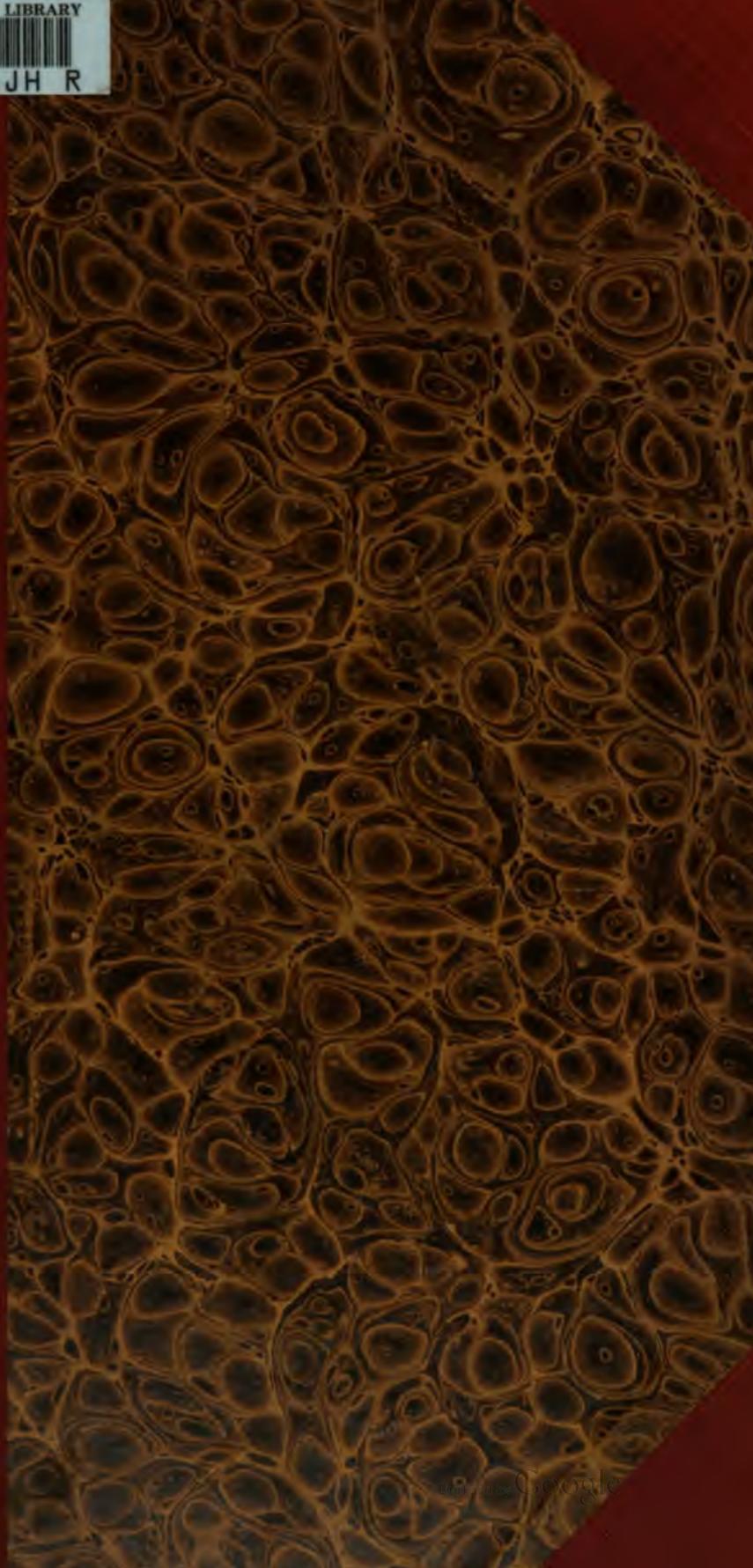
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JOURNAL.



NEW SERIES.

EDITED BY

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ORIGINAL COMMUNICATIONS.

ARTICLE I.

CHLORIDE OF SODIUM. By A. MEANS, M. D., of Oxford, Ga.,
Professor of Chemistry in Atlanta Medical College.

The *Chloride of Sodium* (marine or common salt) is probably found in greater quantities in all *organized* bodies than any other *inorganic* compound, and is the only article in the long list of condiments which is essential to health. Now, the God of Nature has furnished to all beings an instinctive desire or appetite for such nutrient articles as promote their growth and development, secure their preservation, and contribute to their well-being. Nay, more—he has prepared in each an apparatus suited to the digestion, absorption and appropriation of each, and even furnished prehensile appliances adapted to their procurement. Furthermore—such articles, by the order of Divine wisdom and goodness, afford absolute gratification and enjoyment in their use. All these distinctive evidences of *design* are realized in the case of common salt.

It is the plan of Providence, that where there is an extensive or universal demand for elements of nutrition, assimilation, respiration, etc., there will be found an abundant or world-wide supply. *E. g.—Oxygen* is prepared for the *whole breathing world*.

that requires it, whether tenants of the atmosphere, the ocean, lakes or rivers; and *water* for the healthy maintenance, growth and prosperity of the entire animal and vegetable kingdoms—*both* exciting pleasurable emotions in the animal creation, when its demands are gratified.

A fondness for salt, then, which characterizes our race, has existed in all ages, and pervades all nations, classes and conditions of mankind, whether civilized, semi-civilized, or savage, is a strong indication that animal nature requires it for higher purposes than mere sensual gratification, and that in conformity with the providential economy above named, we should expect to find a liberal and diffusive supply of this valuable *haloid* salt, throughout the globe.

Now, *both* of these postulates are assumed and sustained under the sanctions of *philosophy* and *fact*.

The *first* has been vindicated by the researches of chemico-physiology, and the essentiality of the Chloride of Sodium to the full maintenance of the normal functions of the animal economy thus satisfactorily ascertained. It forms an indispensable constituent of the *blood*, and is borne through every portion of the system, to aid in the production of many of its vital phenomena. It is found in the various secretions—as in tears, in bile, in perspiration, etc., and, indeed, in every solid and fluid of the human body, except *enamel*, to the aggregate of 227 grains; and is constantly undergoing decomposition and waste, which can alone be sufficiently repaired by the quantity taken into the stomach, as condiment. Again; free *hydro-chloric acid* is found in the *gastric juice*, the great agent of digestion; and this is evidently formed from a union of the *chlorine* of the salt with the *hydrogen* of *sulphydric acid*, so liberally evolved in the digestive process, or with the same element (*hydrogen*) taken away, by elective affinity, from the serous portion of the blood, or from *both*. The other forms of soda, too, found in the circulating mass, as the carbonate, the tri-basic phosphate, etc., are probably owing to the decomposition of the chloride. Nor is it improbable, from Leibig's analysis, that the latter *salt*, in juxtaposition with free lactic acid, in the nucleated cells of the muscular fibrillæ, complete the galvanic arrangement which

largely generates the electro-vital currents, essential to the mental and physical phenomena of life.

Again; salt is an *antiseptic*—prevents or corrects a tendency to putrescence, either *within* or *without* the human system, and is known to be destructive to parasitic animals which infest the stomach and alimentary canal, as ascarides, lumbrioides, etc. Hence, those who use little or no salt with their food are very subject to be affected by worms. “The ancient laws of Holland,” says Lord Summerville, “ordained men to be kept on bread *alone, unmixed with salt*, as the severest punishment that could be inflicted upon them in their moist climate. The effect,” says he, “was horrible. These wretched criminals are said to have been devoured by worms, engendered in their own *stomachs*.” In the *Medical and Physical Journal*, Dr. Marshall reports the case of a lady “who had a natural aversion to salt, and who was most dreadfully afflicted with worms during the whole of her life.” Let children, then, be accustomed to use provisions properly imbued with salt, and their mothers will have less need to resort to vermifuges.

It is also a *tonic*, and, in moderate quantities, acts as a stimulus “to the mucous membranes, the absorbent vessels, and glands.” Where there is a deficiency of salt in the blood, that fluid assumes “a dark or blackish hue,” and is often accompanied by intractable diseases. This state of things is strikingly exemplified in Asiatic cholera.

It is not, therefore, true, as has been sometimes asserted, that human aliment, unseasoned by salt, as in the savage state, is favorable to long life; for the most ancient and reliable statistics show that longevity is *greatest*, and the highest average duration of life “occurs in countries where wealth, commerce and civilization are most universally diffused,” and where the habitual use of salt among the population is consequently without exception; while, on the contrary, the average is *lowest* where poverty, ignorance and despotic government prevail, and which embraces every form of native barbarism, as well the American aborigines as others. *E. g.*—In enlightened and prosperous England; the rate of mortality is only $2\frac{1}{2}$ per cent. of the population; whereas, amid the millions of the ignorant and

degraded serfs of autocratic Russia, the average, throughout the empire, is 3½ per cent.

It is true, however, that savages who know not the use of salt may pass through an ordinary life without it, but never illustrate the perfection of mental, moral and physical manhood. In such cases, the utmost that can be said is, that nature makes the most of her limited resources, as in the case of vegetarians, who ignore the use of animal flesh, so rich in nitrogen, the base of muscle, and indicated as an appropriate diet, as well by the structure and conformation of the human teeth as by the universal proclivity for that class of food—dependent, in the meantime, for the scanty supply of nitrogen which they receive upon the plants and fruits which they consume.

Nor let it be plausibly urged, that because we have phosphorus, sulphur, potassa, lime, etc., among the constituents of the human body, that we should eat these, as well as salt, in our daily food: First—Because, as independent chemical agents, they would act as corrosives, poison, or medicines, upon the coats of the stomach and intestines. Second—Because, for the slow metamorphosis of the brain, bone, muscle, and other tissues, as well as for the elaboration of milk, bile, saliva, and other secretion—these articles, in a combined state, and harmless, are taken into the system in sufficient quantities by the common aliment—vegetable albumen, fibrin and casein, found in potatoes, beans, peas, oily seeds, etc., containing each about 20 per cent. of sulphur and phosphorus; while the gluten of wheat supplies nearly 16 per cent. of nitrogen; other cereals, a less quantity; and the fibrin of animal muscle alone, used as a food, about 15.75 per cent. So, too, of potassa, lime, magnesia, etc.; for the human system boasts no element in its composition which is not found in, and obtained from, the external world.

But secondly: Nature indicates the great necessity for this saline condiment, by the immense and widespread supply which she affords, in solid and fluid form. A glance alone can be taken of this extensive field.

Rock salt, in vast deposits, is found in Prussia, especially at Wieliczka—in the Tyrol, or crown-lands of Austria—in Bavaria, Salzburg, Hungary, France, Switzerland, Spain, England,

Ireland and Russia, and in both continents of America, to name no other regions; while the supply from lakes, lagoons, salt springs and sea-water, is inexhaustible. Indeed, excepting Norway, Denmark and Holland, every country in Europe has its own domestic sources, and these kingdoms are regularly supplied by commercial intercourse. Even Asia and Africa have not been forgotten. The former is profusely furnished with saline incrustation, or salt lakes and wells, as in Tartary, Armenia, at lake Ooroomiah, (ninety miles long and thirty broad, charged with brine containing 18 per cent. of pure salt, crystallizing, for miles together, a foot thick upon its surface,) and in China and Japan. The latter (Africa) has large deposits in the desert of Saharah, whose yield is a chief source of traffic with Soodan. Two mountains of salt are here found, and the lake Lagres has its surface covered with beautiful white crystallization, sometimes too feet thick. In Central Africa, it is a cheap article of commerce, and regarded so much of a luxury that children eat it like sugar. Mungo Park, the great African traveler, experienced great distress from being, in one locality, deprived of it. And here allow us to remark that the discovery, use, and commercial importance of this pleasurable and healthful relish, among a rude and unenlightened people, is perhaps entirely attributable to the European and American adventurers who have, for half a century, occupied the coasts and interior of Central Africa, and whose habits, customs, and forms of religion, have been gradually molding these "sons of the desert." And the age may come when Nature's vast reservoirs of salt, in these dark regions, may be in demand for the native population. As if foreshadowing this devoutly to be wished result, the French, English, Portuguese and Danes, the Netherlands and the United States, have numerous settlements, forts, castles and factories there, and their farmers, manufacturers, mechanics, merchants and missionaries are leaving their impress upon popular manners wherever they have access.

But why individualize further? The intellect, the labor and the capital of the world have been willingly and extravagantly taxed, and Earth's ample store-houses have liberally responded to furnish in sufficient quantities this great, indispensable sweet-

ener of life. As a synopsis of the whole, then: England turns out 5,000,000 of *tons annually*; United State, say about 500,000; while the English and Dutch West Indies, Mexico, Asia, Africa and other countries supply in the aggregate, say 500,000; thus making the entire annual products of the world *six millions of tons* (6,000,000,) or *twelve thousand millions of pounds* (12,000,000,000.)

But the instincts of quadrupeds and birds lead them to seek this vivifying chemical alterative in their native state; and a benign Providence, besides the amount of its constituents which they obtain through their ordinary food, has spread out the salt plains for the buffalo and the deer, the elk and the wild ox of the forest, and salt lakes and springs for the fowls of Heaven. Indeed, says an able writer, "neither animals nor plants will thrive when totally deprived of salt," though too great a quantity may prove deleterious, as may any other article of diet. Nor must we forbear to remark that salt has been honored in the *Bible* record, and made significantly typical of holier things, among the Hebrews. All the sacrifices of the temple were seasoned with it; new-born babes were to be rubbed with it; and Elijah employed it to correct and "sweeten" the fountain of Jericho. It is also mentioned as one of the things most necessary to life. And to this day, among the inhabitants of the East, it is used as a symbol of *perpetuity, incorruption and hospitality*.

In conclusion, then: while you cannot but regard this as rather a tedious and "*salty*" dissertation upon so common-place a subject, yet you will perceive that your physiological views are, in the opinion of the writer, fully sustained by the philosophy and the facts in the case.*

* This article was written in compliance with the request of Dr. Street, of Tennessee, for Prof. Means' views on this subject.

ARTICLE II.

MEDICAL RESOURCES. By J. G. WESTMORELAND, M. D., Professor of *Materia Medica* in Atlanta Medical College, Atlanta, Georgia.

In order to the successful treatment of disease, means adapted to the various forms in which it appears and the varied conditions of its subjects, must be always at command. There is a simple and common, but nevertheless wise, adage which runs thus: "Prepare for war in time of peace." That commander who neglects the equipment and arrangement of troops until the enemy has made the attack, is not less likely to succeed in routing him than the physician who undertakes to protect the system from the inroads of disease, without having at his command the means by which it is to be done, and a knowledge of the proper manner of using them. Every one knows that opium is an anodyne, and ordinarily quiets restlessness and pain, but this is not always the result of its use when these difficulties exist. Other articles are useful for the same purpose, and peculiarities are possessed by each, differing from the others, which make one more appropriate than another in certain contingencies. All the remedies known to the profession should, therefore, be studied in connection with the classes to which they belong. Not only so, but, as slight variations are found in the same disease, in the constitutional conformation of the patient, and in the circumstances in other respects surrounding different cases, the peculiar and varied minor properties of remedies should also receive due consideration, in order to judicious selection. The indications in the treatment of disease, the classes of remedies, and their *modus operandi*, which are to be wielded in filling those indications, are subjects for grave consideration, and require the exercise of profound judgment. If plans of treatment, one after another, fail, others, founded on rational views of the nature and treatment of disease, should be easily called to mind; and if article after article, of a particular class, fail to come up to the full measure of effect desired, still others should

Original Communications.

be familiarly known, out of which to select one more appropriate. These subjects of study make up the physician's resources. He that ignominiously abandons the wretched sufferer, after a puny effort to stay the disease with which he is afflicted, without such supply of varied resources, has not made that preparation necessary for so important responsibility. That physician most limited in these respects comes nearest the unenviable position of those who are content to trust all to expectancy or one-ideal systems of practice.

When Dr. Chapman reached the acme of his medical career, and was considered the most popular and successful practitioner in the United States, it was said of him, that "his resources were unbounded." Thus it is, that those who lay broad the foundation and keep pace with the discoveries of the age, do, by the direction of a sound judgment, prove a blessing to the world and an honor to the profession.

The science of medicine is progressive, and continually the discovery of new remedies, and new properties to medicines already in use, is being made. The catalogue and classification of remedies made twenty years ago would exhibit a very imperfect state of the science now. Whilst it is advancing in the accumulation of additional truths, its devotees must also be on the alert to keep pace with developments constantly being made. The number and medicinal properties of agents, as understood even in the days of Rush, would not afford resources sufficient to sustain respectability in a physician now. While we cannot penetrate the deep vista of the future sufficiently to realize even the possibility of reaching the goal of perfection, yet the cause of science and humanity urges to progression! progression!!

ATLANTA MEDICAL SOCIETY REPORTS.

ATLANTA, Ga., November 20th, 1867.

Reports of cases being called for—

Dr. J. M. Johnson reported a case of senile gangrene, in which the ankle and instep are involved. Under the use of

warm applications, nourishing diet, stimulants, etc., the case is slowly improving, but does not exhibit sufficient evidences of improvement to warrant entire confidence in his final recovery. The subject is a negro man about sixty-eight years old, and has had good health usually. He had met with a similar case before, in a subject sixty-two years old, and, with the treatment adopted in this, succeeded in preserving the life of the patient, and the limb in a sufficient state of perfection to allow the use of it in walking.

He considered the blood-vessels supplying the foot in a condition unfitting them for the performance of their function, especially that of supplying nutrition, and that the death of the parts involved naturally resulted. Ossification, perhaps more frequently at this period of life than any other cause, leads to the obstruction in the circulation of blood through the arteries, and may be set down as one at least among other causes of senile gangrene.

Dr. W. F. Westmoreland thought distinct varieties of circumscribed gangrene are found: that which arises from an over amount of blood in the part, called soft gangrene, and that which results from a deficiency in the circulation, called dry mortification. The latter is sometimes best treated by amputation of the limb.

Dr. Miller thought the opinion entertained by members, touching the immediate cause and effects of this disease, and that generally received by the profession, is exactly the opposite of the true condition of things which exists in the production and effects of chronic mortification. It is a physiological fact, that the arrest of nutrition in any part, and the consequent arrest of capillary circulation of that part, destroys its vitality, and that the obstruction of the circulation in an artery supplying such part is also an inevitable consequence. Now, the opinions advanced here to-night would indicate an exactly opposite state of influences. It is contended that the circulation in the arterial trunk supplying the gangrenous part has been arrested by ossification of the artery, or some other cause unconnected entirely with the part mortified, and that death of the part occurred in consequence.

Post-mortem examination of the arteries may reveal a condition which may be taken as the cause of the whole difficulty—such as ossification of their walls, occlusion of their caliber, from semi-organized fibrine, etc.; but it must be remembered that ossification is often found to exist when no such results follow, and that when the circulation in an artery is arrested from ligature or other cause, that from the point of obstruction toward the heart to the first bifercation the caliber is found obliterated by soft stricture.

The exact cause or causes operating in the arrest of nutrition resulting in gangrene is not always known. Derangement of nervous influences and an impoverished condition of the blood may at times account for the difficulty.

Dr. Johnson agrees with the learned gentleman, Dr. Miller, that other causes than the ossification of an artery may produce the disease in question. Whatever impairs the quality of the blood, depriving it of its nutrient products, or whatever impairs the energy of the heart, with loss of expansive force in the large and contractile in the small arteries—thus depriving the capillaries of their due supply of nourishment and the limb of its proper standard of warmth—may be set down as the true pathology of senile or chronic gangrene. But he desires to call attention to the treatment which has cured one, at least, of the cases, and will probably relieve both—viz., stimulants and nourishment, scrupulously preserving the warmth of the limb, with stimulating applications to the sore. Both subjects are negroes—one sixty-two, the other sixty-eight years old; in both, the temperaments cold and phlegmatic; both stingy and avaricious; both have the money to pay their bills. They have lived upon

e least that human nature could subsist on since the war, the better to enable them to accumulate a reserve of cash.

Dr. W. F. Westmoreland reported a case of aneurism of the axillary artery, in which the aneurismal sack was opened and filled with charpie, saturated with muriated tincture of iron. The patient thus treated, some four weeks since, is doing well. No difficulty attended nor resulted from the operation, except a slight hemorrhage which occurred some twelve days after, from a small artery communicating with the wound. He preferred,

in the case operated on, muriated tincture of iron for various reasons. The coagulation of blood and contraction of the blood-vessels and surrounding tissues are the direct influences of the remedy in arresting hemorrhage. In the case under consideration, the advantages derived from it are due to its irritating effect upon the sack and soft parts contiguous, causing the effusion of coagulable lymph, thereby promoting permanent adhesion of its walls and consequent security against return of the anurismal tumor. In his experiments with this preparation, some difficulty is found in the use of different specimens, owing, perhaps, to the improper mode of preparing it by some pharmacists.

Dr. D. C. O'Keefe thought it important to determine positively, by experiments on animals, whether the favorable result likely to be realized in the case reported be due to the mechanical influence of the charpie crowded into the anurismal sack, or to the peculiar styptic and irritating properties of the muriated tincture of iron.

ATLANTA, December 8d, 1867.

Dr. A. W. Griggs, of West Point, being invited to meet with the Society, reported a case of recto-vaginal and vesico-vaginal fistulae. No operation had been performed nor any special treatment adopted; but, after the lapse of six or eight months, the opening from the vagina to the rectum closed spontaneously. The vesico-vaginal fistula continued, and in this condition the woman became pregnant. At her confinement in labor, it was ascertained that a tough fibrous growth, interspersed with calcareous deposit, near the external part of the vagina, interfered with the delivery. Without a free incision through this unyielding structure, the passage of the head through the vagina could not be effected. The sand-like substance throughout this abnormal growth made its division difficult. Finally, with a curved bistoury, the division was made and delivery effected.

Dr. S. H. Stout was of opinion that the grit-like substance found in the growth referred to was similar to the structure found in what are called ossified arteries. Pathologists deny the existence of true bony substance in such cases, and assert

that, without calcarious deposition, this peculiar structure, with a low degree of vitality, only resembles in some respects bony structure.

Dr. W. F. Westmoreland thought it not improbable calcareous deposit really existed in the structure described by Dr. Griggs. He generally found such deposition in urinary fistulae of long standing.

Dr. J. G. Westmoreland reported a case of obstinate facial and pericranial neuralgia, which, after cupping, the use of opium hypodermically and otherwise, quinine and mercurial cathartics, continued unabated. From the fact that opium, whether used by hypodermic injection or in the stomach, tended rather to aggravate than lessen the pain, the idea was suggested that an action antagonistic to that of opium would probably be of service. Accordingly, the extract of belladonna, in doses of a fourth of a grain, was given every six hours. Relief was promptly afforded; and two days after, when the pain returned, the remedy was again administered with permanent success.

* ATLANTA, December 17th, 1867.

Dr. J. M. Boring reported a case of probable uterine disease, from which the woman suffered excessive pain in the hypogastric region, with constant nausea and vomiting. Was called at 7 o'clock A. M., and obtained the following history of the case: Six weeks previously she had menstruated properly, and up to the night before my visit, had been in good health. Was taken some four or five hours since with the symptoms before described. On examination, the abdomen presented considerable fulness just above the pubis, which was soft to the touch and very tender. She also complained of strangury. A combination of camphor, assaftetida and hyoscyamus was administered, without affording relief to the sufferer. Returning again at 2 o'clock, found the patient in a sinking condition, and prescribed brandy and chloroform, without benefit. The patient continued to sink, and died during the following night. The request for post-mortem examination was granted.

The opinion entertained by the reporter is that internal hem-

Hemorrhage, probably from extra-uterine foetation, led to the symptoms and fatal termination.

Dr. Douglas favored the probability of violent peritonitis being the cause of death. He thought it not impossible that this condition should lead to the symptoms in the case, and its rapid progress to a fatal termination.

Dr. J. G. Westmoreland did not think the time from the attack to the death of the patient was sufficiently long for death to have resulted from peritonitis, being less than twenty-four hours. On the other hand, it is not very likely that hemorrhage, to the extent of producing such violent symptoms, would result from two weeks' development of an impregnated ovum, whether extra-uterine or otherwise located. While these doubts as to the cause of hemorrhage are indulged, however, it must be confessed that the symptoms detailed are such as might possibly result from loss of blood in the pelvis.

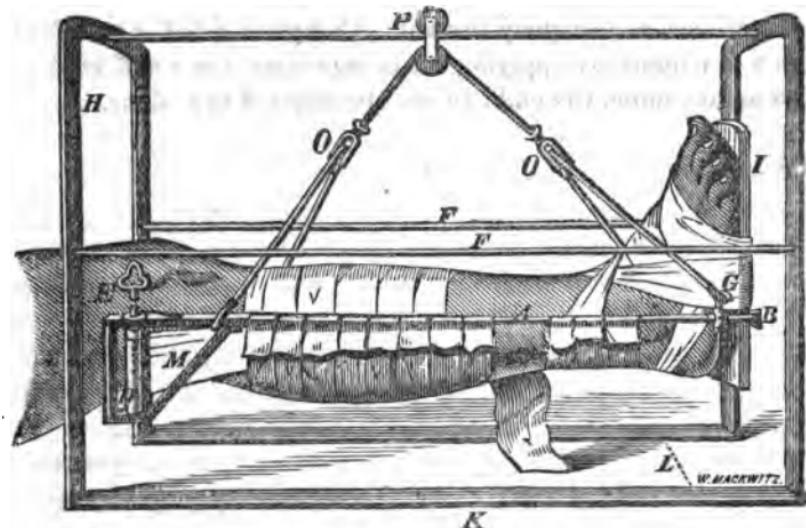
Dr. J. M. Johnson thought it not unreasonable to suppose that fatal hemorrhage may occur from the cause assigned by Dr. Boring.

Dr. J. G. Westmoreland reported a case of strabismus in a child of four years old. Only one eye was affected, and the direction was obliquely inward. Complete relief was afforded in a few hours by applying a bandage over the unaffected eye, so as to compel the child to use the affected eye alone.

A SUSPENSION SPLINT, FOR TREATING SIMPLE AND COMPOUND FRACTURES OF THE LEG. By E. A. CLARK, M. D. Resident Physician, St. Louis City Hospital.

The great necessity for a well adapted apparatus in treating fractures of the leg, suggested the utility of the instrument I have designed in the following wood-cut, which not only answers every practical purpose in treating this class of fractures, but also contributes very much to the comfort of the patient, who, while he is enabled to execute every movement of which the sound limb is capable, yet, cannot displace the fracture or modify the force of extension. In presenting this apparatus, I claim an advantage over those invented by Hutchinson, John Neill, Crandall and Salter, not only for the means of extension and counter-extension, but also its adaptation to the treatment of compound fractures of the leg, as represented in figure No. 1. And considering the simplicity of this instrument, with its cheapness and application to every variety of fractures of the leg, will certainly give it the precedence with those who may venture to use it in a single case. The apparatus is such as may be made by any blacksmith, or indeed by any ingenious surgeon in a case of necessity, when a wooden frame and two hoops with a common iron pulley will answer quite as well as the instrument which I have had made of iron on the following plan.

NO. 1.



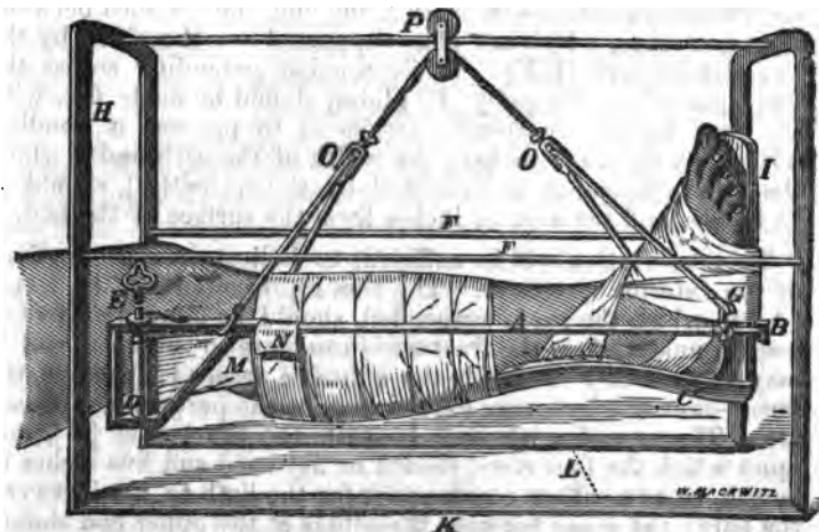
The two arches represented by the letter (H), at one end, are

made of iron bars one-eighth of an inch in thickness, and three-fourths of an inch wide. These arches are continuous with the bottom pieces [K], which support them upon the bed and measure twenty-two inches in length, making the distance between the two arches, which are also supported on the sides by the two slender bars [F.F]. While the bar extending across the top, upon which the pully [P] glides, should be made flat, with the long diameter perpendicular, so as to prevent it bending with the weight of the leg; the width of the arch under which the leg is suspended, as indicated by the letter [L], should be 15 inches, and the arch 18 inches from the surface of the bed.

This description will be sufficient to indicate the proportions of the exterior apparatus. The bars represented by the letter [A], in which the leg is suspended, should be about two feet in length, unless when the fracture is too close to the knee, and it may be necessary to attach the adhesive straps [M] above the knee—then the bars may extend to near the perineum, if necessary. The cross-bar passing beneath the bracket at [B], and upon which the foot rests, should be flattened and five inches in length, so as to allow ample space for the limb to rest between the bars; the space between these bars at the upper end should ordinarily be about six inches. The splint [C] upon which the leg rests in figure No. 1 should be fluted upon its upper surface so as to conform to the shape of the leg, while it is also made oval upon its under surface, so that both the leg and the splint may be included in the bandage shown in figure No. 1, by which means any displacement may be corrected in the fracture and the bones kept in perfect apposition. The foot-piece [I] should be attached to the posterior splint at an obtuse angle, so as to correspond with the natural position of the foot. The foot is bound to this piece by means of adhesive straps, which may embrace the whole of the foot, and extend partially over the ankle, but not so as to arrest the circulation, as by the figure of eight bandage formerly used around the ankle for making extension. The leg, then, as seen in figure No. 1, is supported upon the cross-bar passing under the bracket [B] attached to the foot-piece, and by resting upon the strap [N], pinned over the bars [A] on either side; while the extension and counter-extension is effected by means of the bar across the foot-piece below, and above by means of adhesive straps three inches in width, as indicated by the letter [M], which are attached to the sides of the leg, beginning just above the point of fracture and passing up to be wound around the cylinder [D], which is three and a half inches in length, and turned by means of an ordinary clock key, represented by the letter [E.] This cylinder is held in any position to which it may be turned, by a ratchet and wheel placed

upon the upper surface of the bar, as indicated in the diagram—

NO. 2.



It will be observed in figure No. 2, that there is no posterior splint, as in the other diagram, but the leg is supported entirely by strips of muslin pinned over the bars on either side, which renders this apparatus more appropriate for the treatment of compound fractures in which the wound may be examined and dressed when necessary by removing one or more of these strips, which may be replaced by new ones without disturbing the fracture. The attachment of the foot-piece in this dressing does not in any particular differ from that of figure No. 1. The means of suspension is the same in both these dressings, which, by means of the pulley at the letter [P], the patient is enabled to move his limb, or even his body, forward and back to the extent of the length of the bar upon which it glides, and by means of the cord playing over the under wheel in the same pulley, the patient is able to flex and extend the knee by depressing or elevating the foot, which movement can be executed by a very slight effort on the part of the patient, while at the same time he can swing the leg from side to side to any extent within the space of the arches; and by means of the cords playing through the pulleys at [O.O], the leg can be rotated to any extent, even to allow the patient to lie upon his side, if he desires, without disturbing the fracture in the least. It will be observed in the diagrams, that at the letter [G] there is a thimble, which can be made to slide upon the bar, by means of which the lower

end of the leg can be elevated or depressed, at the will of the patient, by sliding this thimble forward or back, and fixing it at any point by means of the little thumb-screw attached to this thimble. In developing the utility of this apparatus for the treatment of fractures of the leg, I have tried various means of attaching the foot at the bottom—such as the muslin and flannel bandages in the form of a figure of eight around the ankle, covering the foot, also, as far as the toes—but have always found them objectionable from the great amount of pressure and consequent arrest of the circulation in the foot, though the flannel bandage is much less objectionable than the muslin. But I have been able to obviate this defect by the use of the adhesive plaster attached over the front of the foot, and around the foot-piece, as shown in the diagram; this I have ordinarily found quite sufficient, unless in rare cases, when an unusual counter-extending force is required, it may become necessary—as very aptly suggested by Prof. Hammer, of this city—to pass a strip of adhesive plaster beneath the heel and around the foot-piece, which adds very much to the strength of the dressing. I have recently treated six cases of fractures of the leg with this apparatus, in which both bones were fractured, and in which there was more or less liability to shortening in each case, with excellent results in all of them, without allowing the least deformity or shortening, while the patients were all grateful for the comforts allowed them by this apparatus during their confinement.

CANCER OF PYLORUS. By GEORGE P. HANNAWALT, M. D.,
Washington, D. C.

About 20th of August last I was called to see Mr. B—, a resident of the city of Washington, brewer, and a native of Germany. He stated that he had been suffering for several months, chiefly from pain in the stomach and right side, with occasional nausea and vomiting. He also complained of obstinate constipation of the bowels and acid eructations. His appearance was that of a large, well-formed man, about thirty-eight years of age, somewhat emaciated, and with a dull, weary and cachectic expression of countenance.

A careful physical examination revealed a hard, somewhat

moveable tumor in the inferior portion of the epigastric and the right hypochondriac regions. It was not very sensitive to the touch, as considerable pressure could be made upon it without causing pain.

These symptoms, together with the patient's statement that his mother had died of "tumor of the womb," led to the following diagnosis: Cancerous growth of the stomach or liver—possibly both involved.

Purgative medicines were ordered, which, after three days, produced copious pale-colored stools. Full doses of bismuth and morphia were given to correct the acidity of the stomach and allay pain. The bowels were kept open by saline cathartics. Two weeks subsequently jaundice ensued—the conjunctiva and entire surface of the body being deeply colored, the urine loaded with bile, and the exhalations from the body characterized by the peculiar icteric odor.

The patient took food regularly, but described his appetite as "gnawing"—by no means good. At this time the most distressing symptom was the vomiting, which usually occurred within an hour after eating, consisting of the food taken, and a dark coffee-colored fluid of a sickening sourish smell. The pain was not constant, but severe, and, as described by the patient, "shooting from the pit of the stomach to both sides of the body."

These distressing symptoms gradually increased, despite the varied treatment resorted to—the patient's only relief being in the stupor produced by opiates. On October 18th, death from exhaustion released the sufferer.

Autopsy; twelve hours after death. Slight rigor mortis. The stomach was enormously extended, being at least three times its normal size, the greater curvature extending far below the umbilicus—containing about two quarts of brownish fluid, in which were numberless small black scales or clots. A scirrhouous tumor, the size of a very large lemon, was found in the situation before-mentioned, involving the pylorus, part of the duodenum, orifice of the gall-bladder and biliary ducts. The pyloric orifice was so much obstructed as to admit the end of the little finger with great difficulty, while repeated efforts to introduce a small silver probe through either of the biliary ducts was unsuccessful.

The gall-bladder was filled with white, tenacious fluid, of the consistence of thick cream, together with more than fifty calculi, four of which were the size of large hazel nuts, the remaining ones being quite small. These larger concretions were of a reddish-yellow color, except a central portion or nucleus, which, in color and consistence, appeared carbonaceous. The smaller ones seemed to consist, wholly of the same material as the nuclei of

the larger ones. The mucous coat of the sac was perforated by very small ulcers; in the upper part, the membrane hung in disintegrated shreds.

The liver, throughout, was firmer in texture and of a darker color than normal, and, in the region of the tumor, was indurated and closely adherent to the diaphragm.

A close examination failed to discover any further lesion in the thorax or abdomen.

[No more appropriate place than this offers itself to record the autopsies of two cases of cancer, recently coming under our knowledge. The first was that of an Irishman about sixty years of age, under observation but a few days, and supposed to have cancer of the stomach, though the symptoms were obscure. Very little pain was complained of, and physical signs, save emaciation, were disguised, and considerable abdominal enlargement, from ascites. Two days before death severe hematemesis occurred, rendering the idea of cancer of the stomach plausible, and the patient sank rapidly. At the autopsy, the stomach, esophagus and intestines were healthy. The stomach and intestines contained a quantity of dark blood, becoming quite black a short distance from the pyloric orifice, no doubt from the action of the gastric and intestinal fluids. No possible source of hemorrhage was discovered, rendering it certain that the cause was the passive congestion common in such cases. The liver, anteriorly and superiorly, presented the appearance of cirrhosis; from the under surface of the right lobe, near its junction with the lobulus caudatus, grew a yellowish-white tumor, as large as a medium-sized orange. The diseased condition gradually shaded off into the hepatic tissue. The tumor could not have been detected by palpation; it was a soft brain-like mass, and microscopic examination proved it to be undoubtedly encephaloid cancer. The gall-bladder was somewhat distended and contained a large number of gall-stones, consisting principally of insipidated bile. Several pints of serum were found in the peritoneal cavity. No disease existed elsewhere.]

The second case was under the care of Dr. Soule, at the City and County Hospital, and was diagnosticated cancer of the pyloric orifice of the stomach. Considerable emaciation existed. There was not much pain, but for some time previous to death all food was ejected shortly after eating. Post-mortem examination showed the stomach and its orifices to be perfectly healthy. Within the duodenum, however, perhaps four inches from the pyloric orifice, was a large encephaloid cancer, occupying an area of ten or twelve inches, and so softened as to be partially washed away by the water used to cleanse it. At this point, the caliber of the intestine was greatly encroached upon.

Through the center of the mass passed the common bile-duct, the exit of the bile being thus impeded. The gall-bladder was greatly distended, and contained several large biliary concretions. Examination of other organs was not made.]—*H. G., Jr., Pacific Medical and Surgical Journal.*

SUCCESSFUL CASE OF TRACHEOTOMY IN CROUP. By J. H. WYTHE, M. D., Salem Oregon.

On November 28th, 1867, I was desired to hold a consultation with Dr. J. Boswell, respecting two children of Rev. N. Doane, residing in this place. One was a stout boy of twelve years of age, the other a girl of six years. Both were similarly affected, and in an advanced stage of croup. The disease was evidently inflammatory, and began first in the tonsils, with no appearance of diphthritic exudation, and passed downwards, into the larynx and trachea. In the little girl, the suffocative crisis seemed to have passed by the day before, and the disease was affecting the smaller bronchial tubes. In the boy, the larynx was most affected. In both, there was complete aphonia, ringing cough and stridulous breathing, with great restlessness and anxiety. They had been treated with ipecac, and tartar emetic, occasional laxative doses of calomel, sinapisms, etc. I suggested frequent doses of calomel, with a view to its effect on the plastic power of the blood, and referred to tracheotomy as a last resort.

The next evening, the 29th, I was sent for to operate on the boy. There was, however, considerable opposition to the procedure, and much valuable time was lost in considering objections. Dr. H. C. Carpenter was also sent for, and, assisted by him, the attending physician and my son, I opened the trachea.

The boy at the time, was *in articulo mortis*. Deep coma had come on, and consciousness had been suspended for nearly half an hour. The pulse, thread-like and fluttering, could scarcely be felt under the figure. The features were pinched and hippocratic. The extremities were cold and blue, and the diaphragm was making irregular spasmodic efforts at respiration.

I made an incision two inches long through the skin, pushed aside the muscles and vessels with the handle of the knife, and on exposing the trachea, made an opening through it in the usual way, and placed in it a double silver canula. The effect of the operation was immediate. After one or two spasmodic inspirations, the pulse returned, and in a short time animal warmth and consciousness were fully restored.

The next morning, a strong solution of nitrate of silver—120 grains to the ounce—was passed, by a very flexible whalebone probang, into the trachea, both upwards and downwards, which brought away from the larynx several pieces of tough, white, fibrous membrane, and from the trachea a muco-purulent discharge.

A collapse of the lower lobe of the right lung remained for a time, and some difficulty was found during the treatment in keeping the silver tracheal tube free from inspissated mucus. A few drops of glycerin had the best effect for this purpose. Otherwise, the case progressed favorably. On the sixth day, the tube was removed and the wound dressed with adhesive strips. The patient has since remained in excellent health.

A few years ago, I performed the same operation on a child of Dr. Shoemaker, Lazaretto Physician at Philadelphia. She was suffering with diphtheria, and appeared almost at the last gasp. The opening of the trachea gave her great relief, but the disease continued, and exhausted the patient on the sixth day after the operation.

In another case, of an adult, suffocating from a laryngeal abscess, it was evidently the means of saving life.

These instances, in my own experience, lead me to regard tracheotomy with greater favor than authorities and statistics would seem to justify, and I should not hesitate to advise it in cases of imminent suffocation which had resisted a reasonable amount of medical treatment. It has, however, occurred to me that the introduction of a tube (as a catheter) into the trachea through the mouth, might be successfully resorted to in some cases. The chief objection to it would be its liability to increase the inflammation and œdema of the glottis and larynx.

CASE OF NÆVUS SUCCESSFULLY TREATED BY THE APPLICATION OF COLLODION. By L. S. JOYNES, M. D., Professor of Physiology in the Medical College of Virginia. (Read before the Richmond Academy of Medicine.)

As every mode of treating surgical diseases, which may supersede the necessity for the performance of painful, dangerous, or disfiguring operations, should be welcomed as a boon to humanity, I feel it a duty to report the following case of the successful employment of a mode of treating vascular tumors, which appears not to be sufficiently known to the profession. The opposition to take advantage of the strong contraction resulting

from the evaporation of collodion, in order to effect the obliteration of such tumors, is, I am fully aware, no novelty; but the fact that no mention of such a method is to be found in any of our most approved and recent works on surgery, so far as I have been able to discover, justifies the remark, that it is not generally known to the profession. Yet the results of the occasional trials of it which have been reported, from time to time, afford ground for the belief that it will, in many instances, obviate the necessity of a resort to the ligature, the seton, the irritating injection, the caustic, and other operative procedures, more or less harsh, which the surgeon is accustomed to employ in such cases; while it possesses the great recommendations of causing *no pain*, and leaving *no scar*—advantages especially to be valued, when we reflect that the subjects of these tumors are so generally young children, and that they are so frequently situated on the face.

The subject of the present case was a fine, healthy, female infant, four months old, on whose left cheek there had appeared, two or three weeks before, (according to the report made to me), a small red spot, which gradually enlarged and deepened in color. (I can testify that there was no trace of the disease at birth, for I was present at the birth, and saw the child repeatedly afterwards, until it was five weeks old, when I vaccinated it; during all this time it was "without spot or blemish.") When the case presented itself to me for examination, the spot was about three-quarters of an inch in diameter, slightly elevated above the general surface of the cheek, (of which it occupied the centre,) of a purple hue, offering at a distance some resemblance to a contusion, but on a closer examination, it presented an appearance of vascularity and vitality, quite different from the dull, livid aspect of a contusion. Small veins could be seen through the transparent cuticle creeping over the discolored surface. On examining the part with the fingers, the tumor was found to involve the dermoid and subcutaneous areolar tissue, extending to the limits of the discoloration. It was of softish consistence, without pulsation, and evidently not at all sensitive to pressure.

The case being evidently one of *nævus*, with a predominance of the capillary and venous elements in its structure, it appeared to me to afford the fairest opportunity for a trial of the virtues of collodion. Accordingly, on the 16th of December, I applied the collodion freely over the discolored surface with a camel's hair pencil. The contraction which ensued on the drying of the liquid was remarkable. The prominence of the discolored portion of the cheek disappeared; the integument all around was strongly puckered, and through the coating of dried collodion,

the discoloration was seen to be much diminished. The application seemed to cause not the slightest pain or inconvenience to the child.

On the next day I re-applied the collodion, and then entrusted the further application to the mother, directing it to be repeated daily, or at least as often as there were any signs of the detachment of the pellicle. I made occasional visits, and found the case progressing favorably.

January 1st. The pellicle having become detached before my visit, while the child was being washed, I found that there was no longer any *tumor* perceptible, either to the eye or the touch; but there still remained a faint disoloration. I therefore continued the treatment.

January 9th. There is no longer any trace of the nævus; the only disoloration visible is due to two or three minute papulae, produced evidently by the irritating action of the collodion upon the delicate integument. Instead of a prominence, there is now a very slight depression at the site of the nævus, the result of the continued pressure. I directed the application to be suspended for a day or two, in order to allow the subsidence of the slight irritation of the surface, and then to be resumed and continued four or five days longer, in order to confirm the cure.

January 17th. The treatment was discontinued several days ago; the cheek is entirely natural in appearance.

I will add, by way of caution to those who may feel inclined to try this method of treatment, that on one occasion, in applying the collodion, I unthinkingly commenced by making a sweep with the brush around the margin of the tumor, and then rapidly painted over the discolored surface. The result was that the marginal ring dried first, with the effect of producing a partial strangulation of the tumor, which immediately became strongly congested, and much more prominent. The constricting circle, however, was readily dissolved off with a little sulphuric ether, and there was an end of the trouble.

PUFFING OF DOCTORS BY THE NEWSPAPERS.

By reference to the report of the proceedings of the Atchison County Medical Society, it will be seen that body has passed a resolution denying the right of the editors of newspapers to use the names of physicians, in their reports of accidents and cases in general, without the consent of the

physician previously obtained. We heartily indorse this action, though we have no doubt, when the reportorial fraternity come to hear of it, they will find in it new evidence of the proscriptive and illiberal spirit of the medical profession. The barbarians of the outside world are utterly oblivious of that fine feeling of ethical justice which is possessed by every true gentleman of our profession. Hence they are not slow to censure a physician who politely declines to become a party to the bad treatment of another of his cloth. They cannot understand why they are not at liberty to bring in a new attendant in a case of sickness, without notification of the desire to change, to the old one—although the latter may have far more ability to conduct the case than the former, and be doing all that human knowledge could suggest, at the very time.

So when a man gets knocked down in the street, and Dr. — is called to render his assistance, the reporters think it strange they should not be indulged in the privilege of a sensational article, in which the name of Dr. — shall figure prominently, as being the means, not through Providence, but his own extraordinary abilities, of having rescued his fellow-citizen from an untimely death. They do not consider, for a moment, that they know no more of the merits of the case than they do of the nosology of diseases in general; that even if Dr. — has pursued the intelligent course which a thorough knowledge of his profession points out, he has done no more, perhaps, than dozens of others *within the same community* could do; and that by thus singling him out as an object of eulogium, a downright injustice is done to his peers, his betters, and even to the people themselves, in thus investing him with an exclusive skill which he does not, in ninety-nine cases out of one hundred, possess. No true physician desires this kind of notoriety. If he is really learned in his profession, and is possessed of more than ordinary ability, he knows where to display it, that he may reap a fame above the suspicion of having purchased it—that is, through the organs of his profession.

But to do the reporters justice in these particular cases, we must admit that we have seldom seen these unfair puffs concerning physicians, except the doctor has himself had a hand in it. It is true that in recording a casualty in the daily papers, it is generally stated as a fact pertinent to its relation, that Dr. — dressed the man's wound, or extracted

the ball ; but so long as the mere fact is stated as an item of news, and no effort is made to pay a glowing tribute to the doctor's skill, we do not know that we could find much fault with it, or stop the practice if we did. It might result as did the case of an over-sensitive friend of ours, who, observing his name mentioned in a paper, as being in attendance upon a man who had recently been hurt, excitedly called upon the editor to forbid his using his name publicly again. The editor, mistaking the nature of his offending, and anxious to rectify his error, stated the next morning, that our friend Dr. —— was not attending the case at all. This brought the doctor once more to the editor's sanctum, and he was informed that the apology was worse than the offense, inasmuch as it contained a falsehood. The obliging editor said in his next paper, that he was mistaken in stating in his previous issue that Dr. —— was not in attendance upon the man recently hurt ; that the doctor, after first denying it, had now acknowledged that he was in attendance ; and from the fact that the man's death had just been announced, he, the editor, was inclined to believe the doctor's last assertion to be the true one.

From our own observation, the irrelevant portion of newspaper articles referring to physicians, as we have before said, is most usually—not always, of course—prompted by the doctor or his agents. That this is true, will appear from the character of the article itself. This, apart from the mention of a physician in attendance upon an emergency, generally consists of a notice of a particular operation performed by the talented Dr. Marvelous ; and it is really amusing to observe how small an achievement is sometimes made the basis for a huge display of fanfaronade. We remember well a local notice which appeared, a few years since, in one of our city papers, stating that Dr. —— had, upon the day before, performed a most difficult surgical operation—that of extracting a needle from beneath the skin of a woman's chest ; and adding that the result was no less gratifying to the numerous friends of the doctor than it was to the friends of the woman whose life had been so skillfully saved. The gentleman of whom this was said claimed to be a respectable physician.

Editors are like all other people in the world (*except physicians*) in this, that whatever they do beyond the requirements of an exact justice to their fellow-men, and an enno-

bling *amor patriæ*, they do for a consideration; in other words, they are much too shrewd to blow anybody's horn, unless they are furnished the wherewith to raise the wind.—*Leavenworth Medical Herald.*

ON SOME SOURCES OF FALLACY IN THE DIAGNOSIS OF PHthisis.
By W. F. WADE, B. A. M. B., Physician to the General Hospital, Birmingham.

In three-and-twenty years I have seen many cases in which mistakes have been made as to the diagnosis of phthisis, and I do not wish to pretend that all the mistakes have been in the practice of other persons, none in my own. It has long seemed to be one of the weakest points of our profession, that we have been in error; and there is, of course, a still greater reluctance to allow that the error has been an avoidable one. I have sometimes perhaps received credit for making a correct diagnosis in difficult cases, where, perchance, others had been less successful; but I have ever felt that my judgment has been more improved, and my opinion, *quantum valeat*, rendered more valuable, by a candid and careful reflection upon cases where I have been mistaken, than by brooding on others of a more fortunate type. And yet we are all too apt to dwell upon our successes, and to ignore or unfairly extenuate our failures, even to ourselves. I say even to ourselves, for so long as we do not deceive ourselves, I do not say that it is necessary to parade our blunders before ignorant or unthinking persons; but, on the other hand, my experience has not taught me that wise and thoughtful people think the worse of one who is willing candidly and thoughtfully to admit an error, without seeking to gloss it over or palliate it in a disingenuous manner.

Regarding especially the errors made in the diagnosis of phthisis, we find that, as usual, they resolve themselves into those of omission and those of commission. A person is said to have phthisis whom the event proves to have been free from it; or, on the other hand, is pronounced free from it when, by the inexorable logic of subsequent facts, that opinion is falsified.

Before entering into special suggestions applicable to individual cases, it is opportune to point out one general source of fallacy applicable to all.

There is a general reluctance to admit that a case is doubtful, even when doubt is not merely the most philosophical, but the only philosophical, position. The general practitioner fears to imperil his hold upon the confidence of his patient by admitting that he cannot tell whether his patient is or is not phthisical. The consultant, called in for the express purpose of solving an admitted difficulty, requires still greater philosophical courage to confess that, whilst the evidence obtainable cannot fail to raise suspicion, it is yet insufficient to justify a positive opinion either one way or the other. And yet there is a stage in all organic diseases where we are justified only in doubting. And I entertain a conviction, which I trust may never be overturned, that in such cases, both as regards the profession and the public, honesty is, in the long run, the best policy. This position is true, and not only as regards those local organic diseases which are but the expression of constitutional conditions. For example, let us admit, not only that there is in phthisis a pre-tubercular stage, but that its peculiarities are such as to enable us to identify it prior to any development of its local expression. Even here we are compelled to admit that there is a time when it fails to afford sufficient evidence to justify an unqualified and unhesitating verdict, however shrewd and grave may be our suspicions.

There is, to my mind, but little practical inconvenience in having our suspicions aroused at a stage where we are unable to set them at rest. This is the time when, of all others, the case is remediable. It ought to be, and indeed I think is, admitted to be an axiom in medicine, that the patient should have the benefit of any doubt which may exist; and it will, I think, be admitted without discussion, that, in the vast majority of cases, the patient has that benefit if we advise such a course as we should do had circumstances compelled us to form a more positive though less favorable opinion. In all probability, such persons are broken down in health from over-lactation, overwork, or other exhausting causes; and the hygienic measures which are suitable to a case of early phthisis are just those which are most likely to relieve these conditions, which, if unattended to, are well calculated to produce either phthisis itself or a state of per-

manent ill-health scarcely more hopeful, and perhaps even more inconsistent with the active duties of life. Possibly the patient, less anxious, because less far-seeing than ourselves, may neglect our advice, and get well in spite of his neglect. We should feel satisfied if, upon a careful review of the case, we still feel that our advice was the most prudent possible. According to a very astute man, Talleyrand, it sometimes shows better judgment to be deceived than not to be deceived. Paradoxical as such a dictum may appear, the philosophy of it is not far to seek or difficult to understand. With regard to giving patients the advantage of a doubt, there is one other remark to make. The propriety of doing so is well illustrated in the kind of cases already alluded to, and from a consideration of them and others, we may deduce a very useful general law, viz: when in our diagnosis we halt between two opinions—one that the disease is a curable one, the other that it is incurable—we should treat the patient upon the hypothesis that his disease is curable. For example, we may doubt in one case between phthisis in some form and an idiopathic fever, or in another between simple gastric ulcer and cancer of the stomach. In the first instance, we should undoubtedly proceed upon the supposition that the case is one of idiopathic fever, and in the other that it is one of simple gastric ulcer. It seems to me that the reasons for this law are so obvious that it is unnecessary to specify them in detail.

Coming more particularly to the subject of this paper, it is scarcely necessary to remark that the general principles of the diagnosis of phthisis, both physically and symptomatically, are well established, and that I have therefore no intention to recapitulate or reorganize them. And it should be borne in mind that there is a wide difference between difficulties and fallacies. There will always remain cases in which, from one cause or another, the best informed physician, the most careful investigator, and the most wary man, will find great, perhaps insurmountable difficulties. But as regards fallacies, to be aware of them is to be able to avoid them. The case which is obscured by a source of fallacy of which we are ignorant becomes transparent the moment that source of fallacy is pointed out. It has thus occurred to me, from time to time, that certain minutiae which by times, or rather the neglect of which by times, lead to error, might be usefully pointed out, and this I purpose doing with

special reference to errors that have come actually under my notice.

Errors have been committed even by high authorities—some due unquestionably to simple carelessness, and others absolutely inexplicable—and to such I shall not further allude.

Amongst the sources of fallacy which beset the diagnosis of phthisis, pleurisy takes a foremost place. The relations of the two are, indeed, exceedingly complex and interesting; but it would be beyond the scope of this paper to regard them all.

A local dry pleurisy at the apex of the lung not unfrequently furnishes sounds which are with difficulty distinguished from the sounds, creaking or quasi-moist, dependent upon tubercular deposition. It is of high importance to distinguish between the two—of the more importance inasmuch as there are not a few practitioners who would jump to the conclusion that the pleurisy is a sufficient indication of tubercle in the adjacent lung. Careful observation has convinced me that local apical pleurisy may effect a person with unquestionable tubercular tendency without being conjoined with any actual deposit of tubercle recognizable after the cure of the pleurisy.

Acute pleurisy with effusion produces at a certain stage acoustic phenomena, which physical examination, if limited to the subclavian space, cannot with any certainty distinguish from those of softened tubercle. The lung is pressed upward by the effusion, and so condensed as to afford breathing of a tubular character, to be distinguished from tubercular consolidation, or even from a cavity, with difficulty, if at all. The sounds of the voice and the vocal vibration lend us no assistance in differentiating the two conditions. Furthermore, the attrition of the parietal and visceral pleuræ, covered possibly with soft lymph and lubricated by the liquid effusion, produce sounds so similar to mucous rattles that they are calculated to deceive the most practised ear. We thus get an apparent combination of those phenomena which, according to Barth and Roger, (whose dictum on this point I am much disposed to accept), are the only sure diagnostics of a cavity—namely, tubular breathing with moist rattles at the same point. This fallacy is to be avoided by attention to the history of the case, by examination of the whole of the affected side, and not of the apex only, and

more especially by a continued observation of the mutations of sound consequent upon progressive absorption of the fluid. At the same time it is to be noted that in such a case there may be a history which suggests tubercular deposit antecedent to the acute pleurisy. In such a case we are not justified in giving any opinion founded on physical examination till the pleuritic condition has absolutely passed away. The secondary changes which a lung in some cases undergoes in consequence of a severe pleurisy give rise to many physical phenomena, as well as rational symptoms, resembling those dependent upon tubercular deposit and softening. These have been carefully observed and well described by competent authorities; it is therefore unnecessary to say more here than that a want of due acquaintance with the literature of this most important topic has, more than once within my own knowledge, led to an erroneous diagnosis of phthisis. It may be useful just to note that in this condition the "cracked pot sound" is not unfrequently exceedingly well marked. This sound is also oftentimes to be produced by percussing the chest of children in whom there is no evidence, scarcely even a suspicion, of anything besides bronchitis; and in them it is often to be heard over a very considerable area.

It is believed by some persons, whose opinion is entitled to respect, that a dry pleurisy on the right side is most commonly indicative of, or at least associated with phthisis; and if it be so, it is a matter of practical importance.

What is called laryngeal phthisis is usually, if not invariably, ordinary pulmonary phthisis, with laryngeal complication. It is a disease commonly of great obscurity; that is to say, whilst the rational symptoms of phthisis are easily to be perceived, yet the stridor developed in the larynx in a great measure, often completely, obliterates the sounds produced by the pulmonary deposit. Now, it is a well-ascertained fact, though not so readily explicable, that in laryngeal phthisis it is the right lung which is affected, or, if both be diseased, that which is most deeply implicated. In such a case, then, the fact of a dry pleurisy on the right side is a valuable corroboration of our suspicions. Though not directly connected with pleurisy, it is convenient to refer here to another consideration which should weigh with us in the diagnosis of laryngeal phthisis. Inasmuch as the lung disease, if any be present, will be found in the vast majority of

instances, on the right side, it is clear that any suspicious or indefinite sound heard on the right side is vastly more significant than if it occurred on the left. It is not needful to specify more minutely the various sounds which come within the category of suspicious ones; they are sufficiently familiar to any one who takes an interest in this question.

The physical signs of a pneumonia at the apex might readily be mistaken for those of tuberculous deposit by an observer who neglected to take into consideration the history of his patient. It is true of pneumonia as of pleurisy at the apex, that during its presence we must positively decline to give a decided opinion that tubercle is absent—that is to say, unless we have had an opportunity of making special investigation prior to the pneumonic attack. At the same time it is, I think, quite an exception to meet with distinct physical evidence of apical pneumonia in a tuberculous lung. And for my own part, I should consider that unquestionable pneumonia of the apex was, as far as it went, an encouragement to believe that the apex was free from tubercle.

Had it not occurred to me to see both mistakes made, I should scarcely have ventured to imagine that phthisis might be mistaken for typhoid fever, and typhoid fever for phthisis. In expressing surprise at this, I should have said that the former mistake was not made in a case of acute phthisis, the diagnosis of which is (at a certain stage, at least,) one of much difficulty. Were practitioners habitually careful, when dealing with any case of pyrexia, to consider, in the first instance, whether the fever belonged to the great class of primary fevers or to the other great class of secondary fevers, such a mistake could scarcely be made by any moderately competent person.

We now turn to a consideration of some circumstances which may lead to a fallacious opinion that phthisis is absent when it really exists.

In the first place, it must be borne in mind that there is no pathognomonic physical sign of any stage or condition of tubercular deposit in the lungs. The process by which we arrive at the diagnosis of phthisis is a reasoning one of some complexity. It is true that in the ordinary diagnosis of flagrant cases several members of this argument are suppressed. Indeed, so commonly is this done that many persons never know how many or what links there really are

in the chain. But a want of this knowledge is certain, on some occasions, to lead to avoidable error. Imperfect as our science of diagnosis must be admitted to be, I see more mistakes made through the imperfection of the individual using it than through the imperfection of the science itself. I cannot avoid remarking here that formal logic is often most derided by those who have most need of it. And this contempt is often excused by reference to some of those quasi self-evident propositions which are given in illustration of the syllogistic form. It is just as if one were to sneer at arithmetic because the fact that two and two make four might be given as an illustration of one of its rules. There is no such test of the accuracy of our premises and the correctness of our conclusions as the reduction of an argument to the form of a syllogism. Were this done, how many things in medicine which are supposed by the mass to be proved would turn out to be merely probable in a higher or lower degree!

Some of the most important signs of phthisis, and, indeed, those of which we most commonly avail ourselves in practice, are moist sounds, rattles of various kinds at the apex of the lung. Connected with these are several sources of fallacy; and as these signs are those most often actually used, so these fallacies are those which most often lead astray. In the first place, moist sounds, of whatever kind, even at the apex of the lung, and there only, are *per se* no evidence of phthisis at all. Their value as evidence depends entirely upon the perfection of the chain of argument of which they are, it is true, a most valuable link. One peculiarity of these sounds, which careful persons do not neglect to ascertain, is their permanency. It is curious how, day after day, we may examine a chest and find always there the same click or the same mucous râle. They are not permanent because they are directly produced by tubercle, for they are not; but by mucous secretion, of which, indeed, the tubercle, which is permanent, is the immediate cause. This is very far from being a distinction without a difference. The truth is, that in not a few cases these, reputed permanent, râles occasionally disappear, and we then lose a very important element of our diagnosis. A little consideration of the causes of this occasional absence will enable us in many cases to secure the assistance which their presence really affords us.

In the first place, it often requires a full, free inspiration to develop them, even when the mucus is present in sufficient quantity. Thus, in feeble, stupid, or nervous persons, it may be impossible to obtain sufficient respiratory freedom unless their circulation and respiration are so quickened by exercise as to compel them to breathe freely, whether they will or no. It is clear that such persons should not be examined in bed only.

The formation of the upper portion of the chest in some persons causes so much murmur, from pressure on the sub-clavian by the stethoscope, as to be a real source of embarrassment and difficulty; but it can scarcely be termed with propriety a source of fallacy.

In another class of cases the removal of mucus from the chest, which, as we know, is common after rising in the morning, is so complete that none is left to produce a rattle. In such cases it is clear that we avoid a great source of fallacy by examining the patient in bed, before the morning expectoration has occurred. The practical lesson we draw from these two classes of cases is that, in doubtful cases, where the history, symptoms, or appearance of the patient suggest the probability of latent phthisis, we should invariably abstain from pronouncing him to be free from it till we have had an opportunity of making careful examination under different, and indeed, as nearly as may be, opposite circumstances.

Another practical lesson of almost equal importance is that, in examining a case of suspected phthisis, we should listen to each side during ordinary respiration before making the patient take forced or deep inspirations; and again we should be careful, when the patient does take a forced inspiration, to listen first to the lung which we more strongly suspect to be the seat of disease, lest, while we are listening to the sound side, the forced respiration should have removed the mucus, and with it the morbid sounds it produces, from the diseased lung. On the other hand, if we hear a moist rattle at the apex, we must not forget that it is not impossible to have mucus there, and there only, in a non-tubercular lung. But then it is not likely to be there constantly, or even frequently.

It is principally from considerations of this kind that the wisdom of the following axiom becomes apparent—viz:

"Never pronounce an opinion upon a case of supposed phthisis without more than one examination."

There is another reason for observing the precautions above mentioned. I entertain no doubt that in some cases of early phthisis some auscultatory phenomena—for example, feeble inspiratory murmur, possibly also semi-bronchial breathing—depend upon collapse of the lung. This collapse is capable of being removed by forced respiration; and we may thus deprive ourselves of valuable information, which, if it did not justify us in pronouncing the case to be absolutely one of phthisis, would, at all events, guard us against the opposite danger.

The muscular murmur is certainly sometimes a source of fallacy, imitating, as it may do, abnormal respiratory sounds; it is also a source of fallacy in the diagnosis of heart disease. In the case of the lungs, we should be careful to listen attentively to the muscular murmur whilst the patient abstains from breathing; we shall by that means be able to estimate its real amount, and we shall not afterwards find much difficulty in disentangling it, if I may use the expression, from the genuine breath sounds.

The information afforded by auscultation and percussion is so precise, and commonly so full, that the necessity for occasionally supplementing it by other means is so generally recognised as it ought to be. The thermometer has of late been made serviceable in this respect.

In acute phthisis the stethoscopical phenomena are inadequate to establish the diagnosis, at all events for some time. I have consequently known of instances where the practised eye of a physician unskilled in the use of the stethoscope has recognised the true nature of the case, which a skilled stethoscopist, relying solely on his instrument, has failed to do. It is scarcely needful for me to say that I have no desire to depreciate physical diagnosis, but only to point out that in this special class of phthisis it is a source of fallacy if it be too exclusively relied upon.

In some cases of senile phthisis, too, from the general diffusion of the tubercle, the stethoscopical signs are chiefly those of bronchitis, and an implicit reliance upon them leads to error.

In such cases as these the thermometer is a more reliable guide than the stethoscope. But it must not be forgotten that it too requires to be read by an instructed mind, and

not merely by the eye. False inferences may be deduced from thermometrical as from other observations. The following is an illustration. A man was found during convalescence from small pox to have an unduly high temperature, without evident cause; the inference of tuberculosis was drawn. He left the hospital, and passed from under notice. About twelve months after he was seized with symptoms of paralysis, and admitted into hospital under my care. He shortly became comatose, and died. On dissection we found a chronic abscess of the brain, and one also of the spleen, which was, indeed, converted into a bag of pus. His body was quite free from tubercle. It is well known that before we draw from the temperature any inference with regard to tubercle, we must first of all exclude, amongst other things, the possibility of local suppuration. Whether the error in this case was avoidable or not I have no means of judging. If it was not, it points out a source of fallacy in the thermometrical diagnosis of phthisis. It is of importance to note briefly that some cases of cancer of the lung are with difficulty to be distinguished from phthisis, and that as there is such a thing as cancerous hectic, a too exclusive reliance upon the thermometer may lead us widely astray, as I have in one instance found.

The microscope has lately been made more available for the detection of phthisis, and it will afford us invaluable assistance in cases where the stethoscope fails. For example, in cases of what is called "latent pleurisy," no amount of purely stethoscopical skill will avail us; the physical signs of pleurisy drown those of phthisis. Indeed, I think that an expert stethoscopist, trusting, as there is danger of doing, too implicitly to his ear, is more likely to be deceived than a less skilled person trusting to his common sense, and judging from the general appearance and history of the patient.

It has long been known that in phthisis the lung is disintegrated, and that portions of it are expectorated. It has also been long known that these fragments of lung-tissue can be identified by the microscope. But the difficulty of discovering them, even in cases where he might be certain that they were present, from their being inextricably mixed up with mucus and pus, has prevented the microscopical diagnosis of phthisis being as much employed as it ought to have been.

We are, therefore, deeply indebted to Dr. Fenwick, who has suggested a plan of treating the expectoration, which enables us to find the fragments of lung-tissue, and place them in the field of the microscope with as little trouble as it costs us to demonstrate tube-casts in the urins. This facility of manipulation will doubtless lead to a much more frequent employment of this means of supplementing and correcting the information derivable from other sources in cases of supposed phthisis. We shall probably before long have an opportunity of ascertaining from a multiplicity of observations the exact value of this particular method of investigation. That it, like the stethoscope and the thermometer, has its own peculiar sources of fallacy we may well expect to find. If so, it will the better teach us the necessity of correcting one kind of evidence by another, and that accuracy of diagnosis requires care in observation, caution in deduction, and withal modesty remembering that to err is human.—*London Lancet.*

BIRMINGHAM, Dec. 1867.

ON SULPHITE OF MAGNESIA. By JOSEPH P. REMINGTON,
Brooklyn, N. Y.

This salt having been in request lately, the authorities at the writer's command were searched for a formula for its preparation. It did not appear to be a frequent subject for examination, and the published investigations seemed rather meagre and wanting in details.

The only formula appearing was one from Wittstein's *Vierteljahresschrift*, as follows: "Sulphite of Magnesia may be prepared by passing sulphurous acid gas through water holding carbonate of magnesia in suspension; but the salt so obtained is not quite white. A better way is to dissolve 136 parts of crystallized sulphite of soda, free from carbonate and sulphate, in the smallest quantity of hot water, and to filter into this hot liquid a concentrated solution of 123 parts of epsom salts, the mixture to be stirred until cold. The mass of fine crystals which form are allowed to drain on a strainer, then pressed and dried at a moderate heat. The product should weigh 69 parts."

It is not an uncommon occurrence to find the sulphite of soda of commerce contaminated with sulphate and carbonate; and, if made with anything but a freshly prepared sulphite of soda, the yield would be diminished in proportion to the extent of the contamination. There is besides, in the above process, a small yield of the sulphite of magnesia, compared with the quantities of the two salts taken, and the yield was much less than that stated in the writer's hands. Having had the same experience with regard to saturating the carbonate, suspended in water, with sulphurous acid gas, a somewhat different plan was adopted.

Five grammes Jennings' Magnesia (re-calcined) was made into a thick, smooth paste, with 10 c.c. of distilled water; to this was added slowly, with stirring, 102 c.c. of aqueous sulphurous acid, sp. gr. 1-037. The liquid on the surface now showed an acid reaction, and had a yellow color. After standing a few minutes, the supernatant liquid was decanted. The crystals were then placed on a tarred filter and washed with distilled water until the washings came through colorless; and a small portion, on being tested with chloride of barium, produced a precipitate which was almost entirely dissolved by hydrochloric acid. The filter and contents were then dried at a temperature not exceeding 100 deg. F., and weighed 15-310 grammes, which was 3-06 times the weight of the magnesia used, or 306-2 per cent.; the theoretical yield should have been 3-95 times the quantity of magnesia started with.* The loss is owing principally to over saturation, as sulphite of magnesia is very soluble in aqueous sulphurous acid; but it was thought to be best to secure the conversion of the whole of the magnesia by over saturating, since the excess of sulphurous acid can easily be disposed of by decantation, and after draining and washing, the crystals are, of course, free from acid. The sulphite of magnesia, as obtained, was in very small white crystals, having the peculiar taste of the sulphites, though, on account of its insolubility, the taste was not so disagreeable as that of the more soluble sulphites of soda and potassa. The process was tried on a somewhat larger scale, and succeeded. Eight ounces av. of Jennings' Calcined Magnesia was made into a smooth paste with a pint of distilled water and aqueous sulphurous acid U. S. P., sp. gr. 1-035 was added, with

*This is the average of several experiments, all conducted on the same plan and with the same quantities, and represents about what the results would be in ordinary practice.

stirring, until the liquid gave a slight acid reaction; the crystals formed were then allowed to subside, and the clear liquid was decanted; the sulphite of magnesia was then drained on a muslin strainer and washed with distilled water until free from impurities, then again allowed to drain, and dried on bibulous paper; the yield was 1 lb. 8 oz. of dry crystals. The washing can be accomplished most effectually, and with the use of the least water, by allowing the crystals to collect in a stratum on the bottom of the strainer, and then adding just enough distilled water to cover the surface; any sulphate of magnesia is dissolved, and this, together with the yellow mother water, is displaced by the descending clean water, and the salt is left perfectly white. By this process, sulphite of magnesia can be obtained as pure and white as by double decomposition, with economy in the most valuable items, time and labor, the yellow coloration all disappearing by the simple process of washing, and the loss in washing is small, as the salt is difficultly soluble in cold water. The yellow color seems to be caused by an impurity soluble in sulphurous acid (believed to be iron) and it only appears when the acid is in excess, and is, therefore, a good indication that the magnesia is all converted into sulphite. When made from Henry's Magnesia, no yellow color was visible during any step in the process. It is almost needless to say that it was not found profitable to evaporate and re-crystallize the mother water.

SYRUPUS FERRI IODIDI. By EDWARD R. SQUIBB, M. D.

The difficulty of keeping this preparation without change has again been discussed of late in the *London Pharmaceutical Journal*, and the insufficiency of the various plans resorting to have been pretty well shown in these discussions, and in the communications elicited thereby.

In a very considerable experience with the last official process, (U. S. P.) the writer has only once seen the syrup become discolored. In this instance a syrup made in Sep-

tember and put up in pound bottles was found to be all somewhat discolored, though not uniformly so, and all shading off from the surface downward, in January following. This single instance, however, proves that even under ordinary good care, and nearly uniform management, some slight accident may determine a liberation of iodine. Dusty bottles, the use of corks instead of glass stoppers, and many other such apparently trivial matters, will often start or favor this change, though no such causes can be found in the instance referred to.

In estimating the amount of iodine liberated in this change, it was found to be exceedingly small, and practically quite insignificant, even in those bottles which were of the deepest color. No deposit had occurred in any of the bottles, however, and it is doubted whether a deposit ever occurs in any well managed preparation made by any of the later processes. It having been thus shown that the medicinal properties were not materially impaired by this change, since the amount of free iodine was too minute to produce any effect even upon the most delicate condition, a remedy for the discoloration was sought for upon chemical principles, and was soon found in the hyposulphite of soda, and it is the object of this note to publish a method of using the remedy. A solution of fifteen or twenty grains of crystallized hyposulphite of soda in one fluid-ounce of water is strong enough for the purpose, and from fifteen to twenty minims of this solution is sufficient for each pound of the syrup, when the latter is not of a darker color than brown sherry wine. When darker than this, double the quantity is required. The solution is simply added to the discolored syrup in the bottles and shaken up at ordinary temperatures. Syrup so restored is afterward much less susceptible to the change, and the writer has now a specimen which has been freely exposed to the air in a graduated measure for four weeks or more, without any appearance of change even on the surface. The quantity of the solution required to restore the syrup is a measure of the amount of change which may have taken place. The restored syrup is not of the full original green color, but rather more inclined to olive, or a very pale brown, and is not quite as transparent. This latter is probably due to the precipitation of a minute quantity of finely divided sulphur.

This remedy having succeeded in one single instance, is

considered reliable only so far as its chemical principles are concerned, and is only published in order that its applicability may be tested; and the writer suggests to those interested in the subject, who have time to investigate it practically, to ascertain whether the addition of a minute proportion of hyposulphite of soda to freshly made syrup would not secure it against change.

Brooklyn, Feb. 1, 1868.

SENILO GANGRENE. By JAMES T. NEWMAN, M. D.

I was called, on the 3d of December, 1867, to see an old lady, 99 years of age. She was suffering with gangrene senilis. On inquiring into the history of her case, I found that she had valvular disease of the heart, and that she had been laboring under the difficulty about twenty years. I also discovered that seven years ago she had an erysipelatous affection. She recovered from the last named disease, and enjoyed good health, until she contracted dry mortification of the right foot. The course of this terrible malady is too well known to require a minute description. Suffice it to say, that she had great pain in the toes, accompanied with a stinging, burning sensation. The limb did not swell much, but the whole foot and ankle soon became discolored, dry, and without smell, looking as black as charcoal. From the ankle upward it had a mottled appearance all over the leg. I also found the temperature of the member much lower than natural. Although this is called dry mortification, in this case there was a separation of the cuticle, and a dark bloody serum effused into vesicles, as in acute mortification, and the bottom of the vesicles were dark colored and livid. The march of the disease was not rapid. In thirty-five days after the parts became affected, all the toes of the right foot dropped off at the second joint. At this stage of the disease it threw off a very disagreeable odor.

Her appetite is good, and she does not seem to waste as much as I expected. I have described the symptoms and

the course of the case up to the time of writing... Her pulse ranges between fifty-five and sixty. My *confrere* was called in; he commenced feeling along the tibial and fibial arteries up to the popliteal space, and finding no ossification of these arteries, asked me upon what did I base my diagnosis. I told him that I recognized a deficiency of the heart's action in the irregular beating of the pulse, and the difficulty she experienced in respiration. Now what are the causes of *gangrena senilis*? It has been generally supposed that there was ossification of arterial trunks, and sometimes we can feel very distinctly that the artery is ossified. The larger arteries are not invariably ossified in this disease. *Cruveilhier* always referred *gangrena senilis* to ossification.

There must be some unfavorable circumstances combined with the ossification, as impaired health, disease of the heart, or its valves, producing disorder of the circulation. Then the venous blood cannot pass freely, and accumulates in the lower extremities, impeding the circulation. It is doubted by many good surgeons whether ossification of the arteries alone is capable of producing *gangrena senilis*. I think it is not. Among the causes I would name great universal debility, extreme old age, a thickening and ossification of the coats of the arteries, and a consequent diminution of their capacity, and of their muscular and elastic power.

To the case in question—having become satisfied as to the nature of the case, a good nutritious diet was ordered. I also wrote a prescription for an ointment, composed of the following:

B.—Goulard cerate, 3 ii.
Ext. conii, 3 ss.
Acidi. carbol., gtt. xxv.
Chloroform, 3 ss.

M. S. Apply pro re nata.

This mixture was used to control pain, which it did in a measure, but did not seem to arrest the march of the disease. I also directed her a half grain of *Morphia* three times a day. Under this treatment she seemed to get along comfortably until the 26th of December, 1867. She then complained of a heavy weight over the epigastrium, and costiveness. I ordered her a bottle of the *Citrate of magnesia*, which moved her bowels, but appeared to increase the pain in her stomach, and commenced to vomit everything she

ate. I called to see her on the 28th, and found that nothing would lay on her stomach. I gave the following about four o'clock in the evening:

Bismuth nitratis, gr. 1.
 Ext. nucis vomic alcohol, gr. 1.
 Carbonate magnesia, gr. vi.
 Sacch. albi—, gr. xv.
 Oleo. mentha piper, gtts vi.

M. Sg. Divide in duas partes. Sumat unam statim alteram circa medium noctem.

This quieted her stomach, relieved her bowels, and she seemed all right. I still continue the ointment, but give her plenty of good brandy. I have omitted the *Morphia*, because we only get the anodyne, but in *Opium* we get an anodyne, a stimulant, and an absorbent. I now have her on one grain and a half of *Opium*, given three times a day.

The 2d of January, 1868, I took the knife and made five deep incisions, corresponding with the matatarsal bones, in order to give vent to the putrid matter in the cellular tissue. I consider the knife infinitely preferable to the uncertain and tedious method of procuring the detachment of the mortified parts by suppuration; because it diminishes the bulk of the slough, and thereby abates the foetid effluvia.

January 10th. All of the denuded bones have been removed. I was careful not to injure the living parts. The operation occasioned very little pain, and there was no hemorrhage of any consequence. I am very confident that surgeons will reprove me for using the knife, but in this case the process of separation was so slow that I became impatient; I, therefore, departed from an axiom that was always considered by me as false. Besides following a maxim of Celsus, I preferred employing a remedy, though considered by some as uncertain, rather than abandon the patient to an inevitable death—*Satis est enim anceps auxilium experiri quam nullum.* The parts have taken on a healthy appearance, the acute and throbbing pains have subsided; the only sensation now experienced, is that of itching. Pardon me for trespassing on your space, but I attribute the recovery of this case to the prompt use of *Opium* and the knife.

ON GASTRODYNIA. By W. H. DAY, M. D., M. R. C. P., Physician to the Margaret Street Infirmary for Consumption and Diseases of the Chest.

There are few more painful affections, and very few more difficult to cure, than that peculiar functional derangement of the stomach known as gastrodynia, or gastric neuralgia. We know that neuralgia may arise from functional or organic causes. The nervous system may be sufficiently deranged to pervert the function of sensation, varying in degree from mere tingling and numbness to positive and unendurable pain. Angina pectoris, colic, gastrodynia, irritable testicle and uterus are all familiar examples of altered sensation and of agonizing pain in the sympathetic system, or in one or other of its nervous ganglia. When the nerves of special sense are affected, we have tinnitus aurium, muscas volitantes, and alterations of smell and taste. Looking to organic change as one of the causes of neuralgia, we may have lesions of the brain or spinal cord, and the pressure of tumors and spiculae of bone, irritating the nervous centres. There is pain down in the left arm from disease of the heart, pain in the right shoulder from structural change in the liver, and sciatica sometimes springs from disease of the hip-joint. A cancerous growth of the stomach, in its early stages, will cause precisely the same train of symptoms as gastrodynia, arising from poverty of blood and defective assimilation. Gastrodynia occurs under a variety of circumstances, sometimes selecting for its victims the apparently strong and plethoric—at others the temperate and intemperate; but the nervous, the anxious, and the anaemic, and those of feeble constitutional vigor, are most prone to the affection. Those who indulge largely in food and stimulants, and take little exercise, are often the subjects of it. In most cases, the circulation will be found at fault, and the nervous system imperfectly nourished. It is met with in persons of sedentary habits, and is very common in rural districts among the poor, who drink strong and hot tea, and scarcely ever taste animal food. I regard tea-drinking as a most common cause, and in men I have several times traced the misery to drinking coffee after a full dinner. The lower class in the north of England, who eat oat-cake, suffer greatly from gastrodynia. These are the most obstinate cases to treat, and they will not yield to treatment till the diet is improved. This

complaint is usually met with in middle life, and in women more frequently than in men. The pain of *gastrodynia* is peculiar and almost characteristic; it is referred to the situation of the solar plexus, to a spot not larger than a shilling in some cases,* whilst in others it occupies the whole epigastric region, shooting through to the back, beneath one or more scapulae. When the pain is severe, and the patient has fasted some hours (and he will avoid eating to escape the torture that ensues), the stomach becomes enfeebled, and there is much flatulence. The over-distended stomach will of itself produce the phenomena; but in addition, it will press up the diaphragm, and so mechanically interfere with the proper rhythmic action of the heart, causing palpitation, dyspnoea, faintness, and even syncope. After these attacks (for the pain often comes on in paroxysms of severity), patients frequently complain of superficial soreness and pain, so that they cannot bear the weight of their clothes. Some cases are relieved by taking food (probably from the temporary increased secretion of gastric juice); other cases are greatly aggravated by it, and there is positive torture until the food is rejected by vomiting, or it has passed through the pyloric aperture. Brodie has said that, since *gastrodynia* most frequently occurs in atonic cases, and often depends upon flatulence, any diffusible stimulant, giving temporary tone to the stomach, and causing its muscular fibres to contract and expel flatus, will give temporary relief. In many cases, there is neuralgic headache, as a sympathetic action through the vagus. When this is present, it greatly assists our diagnosis of the cause of the epigastric suffering. The pain is far greater than the ordinary pain of *dyspepsia*; it is not the burning pain of *gastric ulcer*, nor the sharp and lancinating pain of *cancer*; it is a pure *neuralgia*—a dull, heavy, gnawing pain; and whatever exhausts the nervous system, as grief, anxiety, fear, bad living, etc., favors the complaint. It is now and then attended by *hypochondriacal* symptoms, and depression of spirits. *Anæmia* is a most fruitful source of this affection, and tubercular disease of the lungs is a frequent accompaniment. As in *gastric ulcer*, constipation and *amenorrhœa* are often present, and for the same reasons—viz., the small amount of food which is taken, and the bloodless condition of the patient.

* These are by far the most difficult cases to treat; they resist one remedy after another. I have found preparations of iron and counter-irritation most applicable to this class of cases.

Treatment.—Under this head I shall speak, separately, of the chief remedies which have been tried from time to time. If the digestive organs are much deranged, and there is acidity, with a thickly-coated tongue, and especially if there is pyrosis, then magnesia, soda, and bismuth or lithia are of service. These may not be enough to effect a cure of themselves, but they put the stomach in better order, and fit it for other remedies. I do not wish to underrate these medicinal agents, but I have not found any great benefit follow their employment. Their prolonged use weakens the digestive functions by neutralizing the acids of the acidulated pepsine, which is the solvent for the nitrogenous or flesh-producing ailments, and there can be no doubt that many cases of habitual indigestion are owing to the frequent and indiscriminate use of these alkalies. When given, I prefer them in combination with sedatives, as prussic acid and very small doses of morphia. If the tongue is reddish at the tip, with prominent papillæ, and there are signs of gastric irritation, bismuth is a remedy of great value. It will be of benefit only when there is excess of secretion on the part of the stomach. When the tongue is clean and pale, it does positive harm. Sometimes small doses give relief; but if the case is obstinate, large doses (from ten to fifteen grains) will prove effectual where smaller doses would fail. I prescribe the liquor bismuthi (Schacht), one drachm, with the same quantity of syrup of ginger, and two minims of the dilute hydrocyanic acid, on an empty stomach, three times a day before meals.*

Preparations of iron are especially to be recommended, from the unhealthiness of the blood, and the general debility which is usually present. I have seen most benefit derived from the citrate of iron and strychnine, in doses of four grains in an ounce of water, three times a day, taken after food. This is a most valuable medicine when the tongue is clean and pallid, and it is particularly indicated if the pain is at all paroxysmal. Occasionally in this disorder, and in other debilitated states of the system, this preparation of iron and strychnine does not agree; and lately two cases have come under my notice in which headache, sickness and great nervous agitation followed each dose. The same unpleasant symptoms have resulted when the remedy was pre-

* The trochisci bismuthi contains two grains of bismuth in each lozenge, and several may be taken with advantage during the day.

scribed in doses of two grains. I need scarcely say, under these circumstances, the medicine must be given up directly. Sometimes the ammonia-citrate or iron will effect a cure after this has failed. At the same time that these remedies are given, counter-irritation over the epigastrium is often of much service.* In one case, attended with great anaemia and extreme feebleness of digestive power, five minims of the tincture of the sesquichloride of iron, given three times a day in an ounce of water, effected a cure when all other remedies that were tried, so far from relieving the pain, tended materially to increase it. The nitrate and oxide of silver are not always to be relied on, but they occasionally come to our assistance when other remedies have ended in disappointment. The most obstinate cases have recovered after other medicines had been given in vain. They are most suitable when the tongue is clean and pale. The oxide has rendered me the most service.

The purified oxide of manganese has been recommended in doses varying from five to fifteen grains, three times a day, on an empty stomach. It may be given in the cases for which we prescribe bismuth, and I am compelled to say I have seen benefit derived from it, though it does not prevent a return of the complaint, like the preparations of iron, when they can be tolerated. The mineral acids, which I prefer to give alone with water, are very useful in many cases of gastric pain, and where the action of the liver is sluggish. They may be given when the urine is turbid and high-colored; and, in fact, as the symptoms improve, the urine will soon become clear. I give the acids in full doses—five minims of the dilute nitric acid, and ten minims of the dilute hydrochloric acid, in an ounce of water—an hour before meals. These acids now and then greatly aggravate the pain of gastrodynia. If the bowels are costive, a pill of Barbadoes aloes, capsicum and quinine, given daily before dinner, will hasten the cure. It is not so much to the remedy which the physician prescribes, that he must attribute his success, as it is to the nice discrimination of all the points that are presented to his view; how he may attack the strongest, yet protect the weakest; how best meet a case having many prominent symptoms, and combat those first which are the most important. On the judicious selection

* The emp. piscis co., to which three or four grains of tartarized antimony is added, answers well; the size of the plaster should be about three inches square.

of these for management, the issue may altogether depend.

I have selected a few cases which best illustrate the plan of treatment recommended:

CASE 1. *Gastrodynia; treatment with oxide of silver.*—Mrs. S—, aged forty-two (May, 1862), has suffered at intervals during the past thirteen years from pain at the pit of the stomach, and nothing afforded relief for any length of time. She now complains of constant aching at the epigastrium, accompanied with great flatulence, palpitation and lowness of spirits. Has headache, coming on usually at night. The tongue is pale and swelled. All the symptoms are aggravated by eating. Pulse 80, very weak. She was ordered the mineral acids, with chloric ether and infusion of columba, three times a day.

May 28th. No improvement; pain and flatulence very great; tongue a little furred. She was ordered three grains of the compound rhubarb pill and one grain of capsicum before dinner daily, and the following draught three times a day: Aromatic spirit of ammonia, half a drachm; chloric ether ten minimis; tincture of ginger and compound tincture of lavender, of each half a drachm, to an ounce and a half of water.

June 16th. No benefit. Ordered one-twelfth of a grain of morphia and three grains of bismuth, in a pill, to be taken three times a day.

Aug. 3d. She has been much better; but the pain and distensions are very trying.

20th. Being still about the same, I prescribed the following pill three times a day, and all other medicine was omitted; Powdered rhubarb, half a drachm; oxide of silver, six grains; muriate of morphia, a grain and a half; confection of roses in sufficient quantity to make twenty pills.

April 1st, 1863. She now complains of slight return of the symptoms, after entire freedom from the headache, palpitation and pain during the winter months. She resumed the medicine, and lost the symptoms entirely in a week. In January, 1866, she had had no return, had gained flesh, and was perfectly well in health.

CASE 2. *Gastrodynia; treatment with mineral acids and steel.* G. A—, age twenty-five, unmarried, a seamstress by occupation (April 13th, 1861). She complains of a heavy dragging pain at the pit of the stomach, always aggravated by taking food. She never vomits her food; the pulse is

small and quick; the face pasty and pallid; there is amenorrhœa and constipation, palpitation, and a very perceptible anaemic bruit over the base of the heart. She was ordered the mineral acids, with tincture of nux vomica, three times a day, before food, and a pill twice a week, consisting of compound colocynth pill, extract of hyoscyamus, and capsicum.

25th. She has derived some benefit, but is very weak; the bowels now act well. Ten minims of the tincture of the muriate of iron were added to each dose of the mixture.

29th. She has entirely lost the pain. To continue the mixture for a month.

CASE 3. M. S—, aged fifty-one, married (April 4th, 1861), has suffered from gastrodynia for many months, and can get no relief. She is a sallow-looking woman, and has cataract in both eyes. She drinks a great deal of tea, and says she cannot afford meat. The tongue is large, pale and clean; the pulse very weak; there is constipation and great flatulence. Similar treatment to that in case No. 2 was adopted, and she expressed herself as quite well on the 25th.

CASE 4. *Gastrodynia; treatment by iron and strychnine.* F. M—, aged twenty-three, single, (April 20, 1864), by occupation a servant; a pale, melancholy-looking girl. She has constant pain in the stomach, and is afraid to eat. There is headache, with a feeble pulse, and great nervous debility. Tongue, clean, red, and fissured. Has been taking "thick white medicine" for a month without relief. She was ordered the following pill three times a day: Citrate of iron and strychnine, three grains; quinine, one grain; confection of roses in sufficient quantity. She was quite well in a month.

In Jan., 1867, she applied again, with similar symptoms, and stated that at the close of last year she had spitting of blood. A physical examination of the chest revealed tubercle in its early stage of developement, and I should, therefore dispair of affording any lasting benefit.

CASE 5. *Severe gastrodynia, complicated with hepatic congestion.* R. P—, aged fifty-three, (July, 1863), married, a gamekeeper, complained of great pain in the stomach, and inability to digest food. He was so worn and emaciated that I strongly suspected malignant disease. Has been unable to follow his employment for six months, and no medicine has done him any good. The urine is acid, scanty, and high-colored; the tongue is thickly coated; there is great

flatulence, pyrosis, and cardiac uneasiness. He was ordered bismuth and magnesia, with dilute hydrocyanic acid, and chloric ether.

Ang. 1st. There was no material improvement. Tenderness existed over the region of the liver, and he had a very sallow aspect. In addition to the mixture, he was ordered one grain of blue pill, and four grains of the extract of taraxacum, every night for a week.

5th. He was much improved in every respect. The infusion of columba was added to the bismuth draught.

10. The tongue was clean, and the urine clear. There was no pyrosis, and the pain had much abated. Ordered the bismuth to be omitted, and one teaspoonfull of the following mixture to be taken in a wineglassful of water three times a day: Citrate of iron and strichnine, two drachms; water, four ounces.

Sept. 5th. He was quite well, and able to resume his work, having gained flesh and strength, and being entirely free from pain.

In July, 1864, there was a return of the symptoms, which gave way in a week to the mercurial and steel. There was in this case some hepatic congestion, not very apparent on examination, which accounted for the symptoms so speedily yielding when the blue pill was prescribed.

The following case is another example of the advantage of similar treatment:

CASE 6. *Severe gastrodynia; hepatic congestion.* E. M.—, aged twenty-eight (May, 1862,) a clergyman, suffered severely for upwards of two years with similar symptoms to those of Case No. 5, and all medicines failed to give him relief till he took a little blue pill. He was exceedingly thin, and had no appetite, and a feeble pulse. I prescribed bismuth, magnesia, and columba before lunch and before dinner, and the following pills twice a week at bed-time: Mercury pill, twelve grains; extract of hyoscyamus, ten grains; compound rhubarb pill, two scruples: divide into twelve pills, two to be taken for a dose. He was quite well in a month, but could never tolerate any preparation of steel.

About this time another clergyman consulted me with very severe gastrodynia, and after trying several remedies to no purpose (including bismuth in a mixture,) the following pill three times a day completely cured him: Subcar-

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L. I. E. S. Selections.

bonate of bismuth, one drachm; powdered rhubarb, one scruple; muriate of morphia, two grains; powdered capsicum, ten grains: in thirty pills.

Notwithstanding the best-directed treatment, cases now and then go unrelieved, and we are obliged to admit the inefficacy of medicine to deal with them. The following cases are examples:

CASE 9. *Severe gastrodynia; no relief from treatment.* H. W—, aged twenty-seven, (April 22, 1864,) a cook, fat and flabby; had fever fourteen years ago, and lost "small bones from the ear;" very deaf ever since. She has had gastrodynia for the past ten years at intervals; had synovial inflammation of the right knee-joint a year and a half ago. The tongue is large, pale, and fissured; the gums white, and teeth large and irregular. There is occasional headache on one side. The bowels are regular; there is flatulence, unattended by proysis. The following are among the remedies unsuccessfully prescribed:

Dec. 31st, 1863. Subcarbonate of bismuth and carbonate of magnesia, of each two grains; muriate of morphia, one grain; to be made into twelve powders. To take one in a little milk, three times a day.

Jan. 12th. Great relief followed, till

March 22nd, when the pain returned as violently as ever. A liniment was rubbed over the epigastrium night and morning, and a pill of steel, quinine, and rhubarb, taken three times a day.

April 7th. Pain is not mitigated. The oxide of silver, with rhubarb, and very small doses of morphia and capsicum, were prescribed.

10th.—No relief whatever. Ordered the purified black oxide of manganese, in doses of ten grains, three times a day, and counter-irritation over the epigastrum.

22d.—The pain subsided for four days, and then returned as acutely as before. The citrate of iron and strychnine was now given, and this afforded relief for a week. I did not see her again till

July 13th, when the pain was again most severe. She was admitted into the Cambridge Hospital, and came out much relieved. Some time after I heard that her suffering was so great that she had to give up her situation as a servant.

On referring to my note-book, I find that a nobleman con-

sulted me for atonic neuralgia of the stomach on the 29th of April, 1861. He was sallow, and had a worn and exsanguine aspect. The suffering had been of ten years' duration, coming on invariably at night, and depriving him of rest and sleep. He would get up and walk for hours in his room. He had always been most temperate in his habits, and never smoked. Two of his family died of malignant disease of the stomach. The tongue was tolerably clean, the bowels regular, and the urine clear. There was no vomiting, no flatulence, no headache—only the severe gnawing, incessant pain. His diet consisted of cocoa, milk, and arrowroot. He described himself as a complete "vegetarian," and said traveling from place to place did him more good than all the physic he had ever taken. He had consulted the most eminent men in London and Paris without deriving the least benefit; on the contrary, medicines increased his sufferings by acting as strong irritants. I once prescribed for him, and added greatly to his misery; and this had been the case with others who had been consulted. A month ago (June, 1867,) he told me that he now ate pastry, and almost any kind of diet, and never felt the slightest pain whatever. His general health and strength had vastly improved.

Manchester-square, W., August, 1867.

EUROPEAN CORRESPONDENCE.

PARIS, FRANCE, December 27, 1867.

To Editors Atlanta Medical and Surgical Journal:

From those who have had opportunities of observing from year to year, I learn that Paris has not been so crowded with the disciples of *Aesculapius*, any one season for a long time as during the present; and the correctness of this seems to be well sustained by the great number of foreigners to be met with at the clinics. In fact, at some of the most popular clinics, as at Desmarre's on Diseases of the Eye, and Jarjavy's on Surgery, the foreign element seems to pre-

ponderate ; and especially is this the case at Dr. Desmarre's. This seems, at least in part, due to the Exhibition, which has drawn so many to the modern Athens during the summer ; and now since it is over, they are devoting themselves to study. The United States is not, perhaps, as well represented in numbers as usual. But she can certainly claim what no other nation can, viz : that she has at this time a female student of medicine attending the hospitals of Paris. I first saw her at the Charité, several days ago, among the students who were accompanying one of the surgeons in his morning visit. On this occasion there was a large number present ; and whenever this is the case, it is well known how difficult it is to get sufficiently near to hear the remarks of the Professor, and at the same time see the patient. Yet her crinoline (for her dress is that usually worn by ladies) generally sufficed to give her a position at the bed-side of the patient; when, however, that was not sufficiently regarded, her seeming determination to overcome all obstacles, together with her small size, enabled her to glide through the crowd and take position by the side of the surgeon, to which she appeared to feel entitled. The sick, of course, had never heard of a Doctress ; consequently, one of the male patients, whose malady required that his person should be more than ordinarily exposed, first inquired what "*petite femme*" (little woman) that was, and what she wanted. After the visit, she went to the amphitheatre to see the operations and to take notes on the lecture. To an American physician standing near me, she spoke very lightly of the female medical schools in the States, especially one in New York, which city she claims as her home. I must do her the justice to say that her manners are genteel, and that she seems earnest in her undertaking.

The case of aneurism treated by digital compression, mentioned in my last, has continued to do well. The large clot contained in the aneurismal sack was removed with a pair of scissors by piece meal, from day to day, as suppura-

tion detached it from the parieties. A compress and bandage over the sack, together with irrigation, constitutes the treatment. In a very short time, the sack will be entirely filled with granulations, and the cure completed. The limb below the knee has been œdematosus, but is now normal.

There is always more or less puerperal fever to be found in the hospitals here. But recently there seems to be an epidemic among the lying-in women. Whether this is owing to causes within the hospital, or is attributable to what is vaguely termed epidemic influences, is not apparent. The wards are not more crowded than usual. But one thing is to be observed in all the *old* hospitals here—those that have been built several hundred years—which must operate more or less unfavorably upon the inmates; viz: the want of proper ventilation. There is really no ventilation to be had in them, unless the doors and windows are left open, which is impracticable in this climate during the winter months. It has been long remarked that capital operations do badly within the city; and, indeed, I am thoroughly persuaded that this is the chief difficulty in the way of treating them. On the contrary, it is pleasant to note, that those of more recent construction have been greatly improved in that respect, and that one just finished has all of the modern improvements of ventilation introduced in it.

But to resume. This epidemic of puerperal fever does not present that regularity in its march, which is usually observed, for in many of the cases pleuritis and pericarditis have been prominent symptoms. Yet, notwithstanding the addition of one or both of these complications, the majority of the cases recover. In a *post mortem* examination seen recently, pus was found in the substance of uterus and in the broad ligament of the left side, but in no other organ. Newly-formed adhesions were formed in the illiac fossæ on both sides, also in the thoracic cavity, on both sides, and in the pericardium. The pleuritic symptoms are generally confined to one side, and it has been noticed that when the left is affected, the gravity of the case is increased.

Within the last few years, the diagnosis of affections of the larynx has been rendered as certain as in any part of external pathology. What has heretofore been uncertain in this respect, for want of proper appliances to expose this organ, has been entirely remedied by the introduction of the laryngoscope. By its use, it is quite as easy to expose to view the superior cavity of the larynx and vocal cords, and to apply remedies to them, as it is to expose and treat diseases of the fauces. A skillful surgeon may even expose to view more or less of the trachea.

M. Fauvel has perhaps given this subject more attention than any one here. He succeeds better in exposing the larynx to a number than any one I have yet seen. To effect this he uses the ordinary Drummond light, the rays of which pass through a brass tube five feet in length, to the mouth of the patient, who sits in front. By taking position on each side of this instrument, quite a number are enabled to see the vocal cords, &c., at the moment the reflector is properly adjusted. Among a large number of cases treated, I have watched the progress of two with much interest. The first, in an old man of sixty years, is a tumor situated on the left side of the larynx, in front of the vocal cord of that side. The pressure which it exerts on the surrounding parts, has so interfered with the function of the organ as to produce complete aphonia, and at times difficulty of respiration. To attempt an operation with cutting instruments, to say nothing of hemorrhage, in an organ so sensitive to the touch, would be very questionable. Hence the removal of the tumor has been commenced by the use of galvano-caustic, an admirable method of using the actual cautery. A portion of the tumor has already been removed. Its entire ablation will require time. But there is every reason to expect a perfect cure, as he has already received partial relief.

The second case is one of paralysis of the left vocal cord. This affection is specific in its origin. Yet it was determined to try the effect of electricity in the commencement. It

was persevered in for several weeks, but while it stimulated the cord to contraction during the application, no permanent good resulted. The hoarseness of the voice, and the red, congested state of the cord seemed more marked than at the beginning of the treatment. Iodide of potassium was next employed. The hoarseness and redness of the vocal cord began to disappear in a few days. The paralysis has also gradually yielded, thereby establishing the correctness of the diagnosis.

I have met with your correspondent, Dr. L. P. Yandall, of Louisville, Kentucky, every day for the last week. He is genial and warm hearted, and a gentleman of fine culture. I have regretted that our studies have prevented us from meeting oftener. He has been devoting himself almost exclusively to affections of the skin, both in London and this city.

W. S. ARMSTRONG, M. D.

EDITORIAL AND MISCELLANEOUS.

OUR JOURNAL.

This is the first Number of Vol. IX, new series. We hope it will suit the views of our patrons, and that they will continue to smile upon us in the future as in the past, and give us the hearty approval we are trying so earnestly to deserve. By this arrangement we reduce our expenses 25 per cent., and our patrons have a like reduction in the price of the Journal, whilst they get nearly the same amount of reading matter in the bi-monthly they formerly got in the monthly. In other words, one number of the bi-monthly

contains nearly as much reading matter as two numbers of the monthly.

We beg to say to our patrons that we are far from being discouraged. We believe there is a better day coming, and for that better day we will work, and hope, and wait.

We are not young, nor yet have we faded into the *scar and yellow leaf*; but no matter how this may be, we believe we shall live to see the end of burdensome taxation, military rule, stamp taxes, internal revenue officers, and the swarm of free-booters, plunderers and spies that infest the country from the Potomac to Texas. We believe we shall yet see the glorious sun shed down his prolific radiance upon the golden harvests, and grassy plains, and waving forests of a prosperous and happy people, whose patient endurance of wrong shall have extorted her deliverance even from her enemies. We expect to see all this and much more. The husbandman will sow and reap where desolation now reigns. The vine-dresser will erect his trellis and gather from the fruitful scuppernong, unequaled by oriental fable, a vintage fit for kings. Churches, school houses and colleges, swept to desolation by the wrathful fury of passion and war, will rise like the Phoenix from her ashes, and religion and science, twin sisters of human happiness and hope, shed their benign and irradiating influence all over the land. Then let us hold up our heads, nor abate one jot or tittle of our diligence in calling back the dignity, beauty and glory of our beloved land. Let us plant again our fruit trees and vineyards. Let gentle hands train the multiflora and cypress, and inhale the perfume of the violet and rose, before the dew, yet fresh from mystic springs, gives its sweetness to the zephyr and the sun.

We say again, let us faint not, but gathering new strength and a loftier courage, rise to the dignity of the crisis, bearing a manly part in upholding our Christian civilization, and in fulfilling a mission sublime in the objects it contemplates, being nothing less than the preservation of science,

literature, religion and social progress from the inert despair which now broods like a pall over the fairest portion of the universe.

It is now boldly asserted that Southern civilization was a myth; that they have contributed little to literature, to science, or the arts; that they lack thoroughness in everything; and that those who do aspire to great ends must seek mental food elsewhere than at home. Shall we give countenance to this monstrous libel by permitting our own institutions to languish, nay, to perish, under the plea of hard times? "We know you are poor; we also are poor. Upon your devoted heads fell the fury of a four years war; and so it did upon ours. With you we marched through snows and rains without tents, and almost without food or clothes, to find ourselves destitute, at the close of the war, of even a pocket-knife; and yet we have lived. Many times within a year we have not had a half day's supply of food for a family of eight persons; and yet we have never failed to publish the Journal.

Let our friends strengthen our hands as they may be able, and we will put to the blush the monstrous assumptions of our enemies.

ATLANTA MEDICAL COLLEGE.

The regular session of this institution will commence on the first Monday in May next. Arrangements have been made for a large class, and there is scarcely a doubt that our expectations will be realized. We have received letters from every Southern State, conveying the most gratifying assurances on this subject; and from this and other sources we incline to the opinion that the class in number will fall little, if any, below those before the war.

The Atlanta Medical College offers every inducement that

any other institution can offer to gentlemen seeking a medical education. Prof. Armstrong is now in Europe perfecting himself in the study of microscopy, which will constitute a part of the course, thereby enabling the students to become familiar with the instrument, so as to observe the capillary circulation, and the healthy and morbid condition of the minute structures, etc., etc.

Steps have been taken by the Faculty to admit two beneficiaries from each Congressional District throughout the Southern States, from amongst those who are too poor to pay full charges, upon the payment of twenty dollars to cover College expenses. Certificates of good standing and also the pecuniary condition of the applicant to accompany the application.

Facilities for practical study are ample. There is on the College grounds a hospital numbering one hundred patients, embracing nearly all the varieties of known disease, besides the College Dispensary, in which ten to twenty are examined daily. It will thus be seen that no place can offer inducements superior to Atlanta in this respect. This city is celebrated for its fine water, and its salubrious atmosphere. No place on the globe is healthier.

MEDICAL ASSOCIATION OF GEORGIA.

The next meeting of this body will be held on the second Wednesday (8th day) of April, and Augusta was selected as the place for the session of the present year. As evidence of the interest manifested by members present at the meeting in Griffin last year, we would mention the fact that committees were appointed to revise the constitution and by-laws, to receive and examine prize Essays, etc., etc. From notices in the last issue of our Journal it seems that some, as least, of the committees appointed are alive to the duties

assigned them. By all means let us have a correct and full revision of the constitution and by-laws. Those now of force are in detached portions, passed by the body at different times, and many of them published only in the various Medical journals, copying the transactions. In order to know what they are as a whole, compilation and revision are altogether necessary, and it is hoped the committee will present at the meeting in Augusta, a code such as may be authorized by the various changes and additions made from time to time. Nothing is more conducive to the uprightness, advancement and usefulness of the profession, than the annual meetings of physicians in the State, properly conducted. Every respectable graduate in Medicine can be a member by making application at a meeting of the Association, and as the place of meeting is changed every year, from place to place, most physicians have an opportunity of doing so at some time or other, without inconvenience. Though the stringency in pecuniary matters will prevent the attendance of many in distant portions of the State, at the approaching meeting in Augusta, yet we hope to have a reunion of the brotherhood, particularly from Eastern Georgia, which will inspire members with enthusiasm in scientific investigations for the next twelve months.

The committee of arrangement will doubtless secure, if possible, the passage of members at half fare, as usual, over the several railroads.

MARRIED.

PHARES—BARFIELD.—March 5th, at the residence of the bride's father, near Clinton, La., by Rev. W. Ballard, J. H. PHARES, M. D., of Newtonia, Miss., and Miss EMILY E. BARFIELD.

BIBLIOGRAPHICAL.

A PRACTICAL TREATISE ON THE DISEASES OF WOMEN. By T. GAILLARD THOMAS, M. D., *Professor of Obstetrics and the Diseases of Women and Children in the College of Physicians and Surgeons, New York; Physician to Bellevue Hospital; Consulting Physician to the State Women's Hospital; Late President of the New York Obstetrical Society; Member of the New York Academy of Medicine; of the County Medical Society, &c., &c.* With Two Hundred and Nineteen Illustrations. Philadelphia: Henry C. Lea. 1868.

We have only had time to give this new volume of 625 pages, upon a very important class of diseases, a hasty examination, from which we are led to believe that it is the best work that has yet appeared on the diseases of women. There is about it a precision and accuracy, a fullness and completeness, a clearness and simplicity, to be found in no other book on the same subject within our knowledge. It steers clear of the hobbies of Bennett, Simpson, Tyler Smith, Tilt, and others; its views on uterine pathology are, to our mind, more consonant with reason and common sense than any other we have seen. Enjoying fine opportunities in an extensive field of observation, Dr. Thomas, as an author, has fully sustained his high reputation as a teacher.

We may refer to this work again after a more thorough examination of its contents, and in the meantime, have no hesitation in strongly recommending it to the profession as the best exposition yet published of the subjects of which it treats.

D. C. O'K.

DR. BENJAMIN DUDLEY LAY.

This talented and excellent gentleman has, as we see from the proceedings of the Paducah Ky. Medical Society, removed from that city to locate permanently in Mobile, Ala. We commend him to the brotherhood of Medicine, as an educated physician—a man of letters—an honorable competitor, and a warm, unflinching friend, when friends are needed. He served the Confederacy with distinction from the beginning to the end of the war, and was one of the many accomplished Surgeons and Physicians who nobly sacrificed all else for the cause he loved.

AMERICAN MEDICAL ASSOCIATION.

The Nineteenth Annual Meeting of the American Medical Association will be held in Washington on Tuesday, May 5th, 1868, at 11 o'clock A. M.

The following Committees are expected to report:

On Ophthalmology—Dr. Jos. S. Hildreth, Illinois, Chairman.

On Cultivation of the Cinchona Tree—Dr. J. M. Turner, D. O., Chairman.

On Surgical Diseases of Women—Dr. Theophilus Parvin, Indiana, Chairman.

On Rank of Medical Men in the Navy—Dr. N. S. Davis, Illinois, Chairman.

On Insanity—Dr. C. A. Lee, N. Y., Chairman.

On American Medical Necrology—Dr. C. C. Cox, Maryland, Chairman.

On Leakage of Gas Pipes—Dr. J. C. Draper, New York, Chairman.

On Medical Ethics, ——, Chairman.

On Plan of Organization—Dr. C. C. Cox, Maryland, Chairman.

On Provision for the Insane—Dr. C. A. Lee, New York, Chairman.

On the Climatology and Epidemics of Maine—Dr. J. C. Weston.

Of New Hampshire, Dr. P. A. Stackpole.
Vermont, Dr. Henry Janes.
Massachusetts, Dr. Alfred C. Garratt.
Rhode Island, Dr. C. W. Parsons.
Connecticut, Dr. E. K. Hunt.
New York, Dr. W. F. Thoms.
New Jersey, Dr. Ezra M. Hunt.
Pennsylvania, Dr. D. F. Condie.
Maryland, Dr. O. S. Mahon.
Georgia, Dr. Juriah Harriss.
Missouri, Dr. Geo. Engelman.
Alabama, Dr. R. Miller.
Texas, Dr. T. J. Heard.
Illinois, Dr. R. C. Hamil.
Indiana, Dr. J. F. Hibberd.
District of Columbia, Dr. T. Antisell.
Iowa, Dr. J. W. H. Baker.
Michigan, Dr. Ab'm. Sager.
Ohio, Dr. J. W. Russell.
California, Dr. F. W. Hatch.
Tennessee, Dr. Joseph Jones.
West Virginia, Dr. E. A. Hildreth.
Minnesota, Dr. Samuel Willey.

On Clinical Thermometry in Diphtheria—Dr. Joseph G. Richardson, New York, Chairman.

On the Treatment of Disease by Atomized Substances—Dr. A. G. Field, Iowa, Chairman.

On the Ligation of Arteries—Dr. Benj. Howard, New York, Chairman.

On the Treatment of Club-Foot without Tenotomy—Dr. L. A. Sayre, New York, Chairman.

On the Radical Cure of Hernia—Dr. G. C. Blackman, Ohio, Chairman.

On Operations for Hare-Lip—Dr. Hammer, Missouri, Chairman.

On Errors of Diagnosis in Abdominal Tumors—Dr. G. C. E. Weber, Ohio, Chairman.

On Prize Essays—Dr. Charles Woodward, Ohio, Chairman.

On Medical Education—Dr. A. B. Palmer, Michigan, Chairman.

On Medical Literature—Dr. Geo. Mendenhall, Ohio, Chairman.

Secretaries of all medical organizations are requested to forward lists of their Delegates, as soon as elected, to the Permanent Secretary.

W. B. ATKINSON.

ERRATA IN JANUARY AND FEBRUARY NOS.

P. 471, l. 7 from top, after "specific" read "name;" l. 8, before "stems" read "scabrous;" p. 497, l. 17 from top, instead of "chicken" read "checker;" l. 23, after "usually" read "snowy white, sometimes tinged with red, densely hairy within, two on each ovary;" l. 24, read "insipid;" p. 498, l. 7 from bottom, instead of "best, best," read "last, best;" p. 449, l. 7 from top, instead of "prepared" read "preferred;" p. 500, l. 16 from top, instead of "Gelsemium" read "Gelsemium;" p. 502, l. 2 from bottom, instead of "9600" read "1600;" p. 469, l. 26, for "oz." read "oj.;" p. 517, l. 16, instead of "for no higher motive" read "from," etc.; p. 518, l. 7, for "physical" read "psychical;" l. 9 and 10, for "affirmation" read "affirmative;" l. 14, for "providence" read "revelation;" l. 23, for "prevents" read "perverts."

ATLANTA MEDICAL COLLEGE.

The regular course of Lectures for 1868 will commence on the first Monday in May next, and continue until the first of the following September.

In making this Annual Announcement the Faculty are gratified in being able to state that the building is now in good condition and has been resupplied with appliances for instruction in the various departments of the College.

FACULTY.

- A. MEANS, M. D., Professor of Medical and General Chemistry.
D. C. O'KEEFE, M. D., Professor of Theory and Practice of Medicine.
JESSE BORING, M. D., Professor of Obstetrics and Diseases of Women and Children.
W. F. WESTMORELAND, M. D., Professor of Principles and Practice of Surgery.
H. V. M. MILLER, M. D., Professor of Clinical Medicine.
J. M. JOHNSON, M. D., Professor of Physiology.
W. S. ARMSTRONG, M. D., Professor of Anatomy.
J. G. WESTMORELAND, M. D., Professor of Materia Medica and Therapeutics.
G. L. JONES, M. D., Demonstrator of Anatomy.
N. D'ALVIGNY, M. D., Curator.

FEES.

For the Course of Lectures,.....	\$120
Matriculation, (taken once only).....	5
Dissecting Ticket, (required only once).....	10
Diploma Fee,.....	.25

Good board and lodging can be had at \$20 per month.

Students, on their arrival, can be conducted to suitable boarding houses by calling for the Janitor, at the College.

For further information address

J. G. WESTMORELAND, M. D., *Dean.*
February 1868.

Vol. IX.

MAY & JUNE, 1868.

No. 2.

ATLANTA

Medical and Surgical JOURNAL.

NEW SERIES.

EDITED BY

J. G. WESTMORELAND, M. D.,

Professor of Materia Medica and Therapeutics in the Atlanta Medical College.

W. F. WESTMORELAND, M. D.,

Professor of the Principles and Practice of Surgery in the Atlanta Medical College.

AND

J. M. JOHNSON, M. D.

Professor of Physiology in the Atlanta Medical College.

PAX et scientia, sed veritas sine timore.

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No. 2.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

A CASE OF PLEURO-PNEUMONIA, ASSOCIATED WITH INTERMITTENT FEVER. By Wm. O'DANIEL, M. D., of Marion, Ga.

On the 20th of December last, at 8 o'clock, p. m., I was called to see Peter Y—, a colored boy about fourteen years old.

Upon inquiry, I found that he had had several attacks of Intermittent fever during the summer and fall months. I examined the patient carefully, and found the following symptoms existing:

Spleen and liver very much enlarged, crepitant rhoncus; bronchial respiration, though not very distinct; skin hot and dry; circulation 120 per minute, with considerable volume; bowels constipated, and very much swollen; tongue furred; very acute pain on either side near the nipples, and also under the right scapula; constant cough, attended with slight expectoration of a bloody character; respiration hurried; patient rests most comfortably on back.

Had a chill on the 15th of December at night, followed by high febrile excitement, though the fever abated by next

evening. Had another on the 17th at night, followed as before by high fever, though it did not abate as it did before. It was then thought by the employer of the child's father, who is a very intelligent gentleman indeed, to be a case of simple Intermittent fever; consequently, he endeavored to meet the next paroxysm with quinine, which failed to have the desired effect, and I was, as I before said, called to see him on the 20th, and diagnosticated the case as above, and employed the following treatment, to be commenced at 9 o'clock, p. m.,

R—Hyd. chlor. mit.

Pulv. rhei aa. grs. x.
which evacuated the bowels freely by morning. I then employed the following:

R—Potas. nit., grs. xxx.

Antim. et potas. tart., grs. j.

Mix et ft. chart. No. 5. One to be given every 3 hours.

Called to see patient on the evening of the 21st, and found the circulation 100 per minute; bronchial respiration; dullness on percussion; perspiring freely; pain in the breast more lancinating than on the day before.

I applied a large blister over the region of the lungs, and prescribed—

R—Quinia, grs. xv.

Potas. nit., grs. xx.

Pulv. doveri, grs. xij.

Antim. et potas. tart., grs. ss.

Mix et ft. chart. No. 3. One every 3 hours, to be commenced at 12 o'clock at night.

Called at 9 o'clock on the morning of the 22d, and found circulation 90 per minute; expectoration rusty; sputa free; resting well.

Prescribed—

R—Potas. nit., grs. xxx.

Antim. et potas. tart., grs. j.

Mix and divide into chart No. 5. One to be given every 3 hours.

B—Quinia, grs. xv.

Pulv. doveri, grs. xij.

Mix et ft. chart. No. 3. One to be given every 3 hours, to be commenced at 12 o'clock at night.

Called again at 9 o'clock on the morning of the 23d, and found him expectorating freely. Circulation 90 per minute, and doing well.

Prescribed—

B—Potas. nit., grs. xxx.

Antim. et potas. tart., grs. j.

Pulv. doveri, grs. xv.

Mix et ft. chart. No. 5. One to be given every 3 hours.

Advised suitable nourishment, and brandy and water, pro re nata.

Called on the 24th. Found patient discharging sputa freely; able to sit up in bed a short while at a time; considered him much better, and continued treatment.

Called again on the 25th, and found him still improving; discharge from lungs considerably less; continued treatment.

Called on the 27th, and found him still improving; able to walk about the room. Continued treatment, and dismissed the case.

On the 2d of January I was called to see patient in great haste. Upon my arrival, I found him dead. I was reliably informed that he continued to improve, and got able to be up most of his time, and, unexpectedly to every one, was seized by a convulsion, and died in the 12th one, 3 hours after first attacked by them.

Autopsy 6 hours after death revealed the following: Traces of hepitzation of base of both lungs; thorax and right lung adhered, which verifies the existence of pleuritis. Adhesion of pericardium, with considerable effusion.

ARTICLE II.

UTERINE DISEASES. By J. G. WESTMORELAND, M. D., Professor of *Materia Medica* and *Therapeutics* in Atlanta Medical College.

Perhaps no organ in the body is so prolific of disease, and none has such varied and mysterious symptoms, as the uterus. This is not remarkable, when it is considered physiologically. In addition to the monthly changes which regularly occur, causing plethora to the extent, sometimes, of actual engorgement, it is the natural receptacle, source of nourishment, and place of development for the impregnated ovum. The sudden and vast changes in the amount of blood sent to it in the performance of these functions, and the time of rest which ensues after their accomplishment, require the strictest hygienic measures to prevent that degree of congestion from which generally arise the various forms of local disease to which the womb is subject.

That uterine affections should be treated unprofitably to the patient and unsatisfactorily to the physician, cannot be wondered at, when it is known how very frequently we have an entire misconception of the true pathological state of the womb itself. Functional disturbance is attributed too often to external causes, and to the various forms of general derangement of the system, unconnected directly with this organ. While it is true that, in common with other organs, the uterus fails to perform its functions when the great general influences derived from the nervous and circulatory systems are deranged, before any organic disease exists, yet, in a large majority of cases, this difficulty gives no lasting trouble, unless structural changes of a more or less permanent nature exist in the womb. A thorough acquaintance with the nature of organic diseases of the uterus, and their effects upon the nervous system, is necessary in order to detect in the multiform nervous symptoms which result, the

existence of uterine derangement as their cause. These symptoms are often exhibited exclusively in organs perfectly free from structural disease, but whose functions are temporarily disturbed by the reflex nervous impressions upon them on account of the pathological condition of the womb. Moreover, these symptoms are often deceptive as to the actual functional derangement which they seem to indicate. The state of the nervous system thus induced leads to the development of symptoms which are mistaken for those of indigestion, imperfect respiration and cardiac debility, when, in fact, these functions are perfectly performed. Days, months, and even years of treatment have been expended thus upon a healthy organ, on account of the manifestation of symptoms in them which seem to demand treatment. Symptoms resembling those of indigestion, such as pain and fulness of the epigastrum, with eructations, &c., are frequently met with in chronic uterine disease, and are generally found persistent when remedies are directed alone to the stomach. The same may be said of the sensations which are attributed to, at least, functional disease of the heart, when no such disease actually exists.

From these remarks it must not be inferred that, in our opinion, patients of this description dissemble in their manifestations of suffering. Far from it. Our sympathies are always aroused for such unfortunate sufferers. And though no *permanent* relief is obtained by remedies addressed to this state of the nervous system, yet that abatement, so important sometimes to the patient, is secured temporarily. All such manifestations from reflex nervous disturbance in the female are included under the general term *Hysteria*—a term applied to them by ancient medical writers, who attributed them, and properly we think, to uterine disturbance.

We would not be understood to advocate the opinion that the functions of organs remote from the uterus are not sometimes actually deranged from this cause, and even perma-

nent disease in them produced. Such, we have every reason to believe, is frequently the case. With such a constant state of reflex nervous disturbance, the organs thus failing to receive the ordinary healthy nervous supply must, of necessity, suffer at some time functional, and even organic disturbance. The peculiar phases assumed in this form of nervous disturbances, as well as many of the natural phenomena connected with the nervous system, are, in the present state of science, inscrutable. Why it is that in chronic disease of the uterus the reflex influence from the local irritation should affect that portion of the cerebro-spinal centres, situated in the dorsal spine, more prominently than other parts of the cord, has not been satisfactorily explained; and yet the tenderness at this portion of the spinal column, and the manifestation of nervous derangement more frequently in the organs supplied with nerves from this part of the cord, prove conclusively this fact. We would naturally expect to find that portion of the cord most affected by transmission of the local irritation, from which arise the nerves supplying the uterus, yet the above facts, and the frequent absence of such symptoms connected with the lumbar and sacral regions would lead to a different conclusion.

After the consideration of these mysterious developments, the most important matter connected with this subject, and for the discussion of which this article was more particularly intended, is the nature and treatment of the various forms of non-malignant uterine chronic disease to which the organ is liable. We have already stated that disturbance, purely functional, is much less frequently met with than is by some supposed; and that such, when in existence, readily subsides when the irregularities in the governing systems of the body upon which it depends is corrected, we think equally certain. If, however, as before intimated, irregularities of the nervous or circulatory system are suffered to remain till structural changes occur in the uterus, the latter will continue and keep up the functional disturbance, though

the first causes may abate. It would seem reasonable to conclude that engorgement is the most frequent primary disturbance in uterine disease. To a want of vitality, however, existing either as the cause or result of an anaemic condition of the womb, doubtless chronic lesions are sometimes due.

We have alluded to the unfortunate mistake sometimes made in treating the results of uterine disease as manifested in the various forms of nervous derangement, with the view of permanent relief. No less so is that directed to the results exhibited in the womb itself. Various forms of functional disturbance and mal-positions of the uterus result from organic or structural changes. Dysmenorrhœa, suppressed menstruation, &c., are some of the effects of uterine disease upon the function of the organ, and are improperly classed, and for years unsuccessfully treated, as uterine disease by name. The same may be said of the various forms of displacement, &c., of the womb. Prolapsus, the different horizontal variations, and leucorrhœa are also the result or effects of disease, but are often recognized and treated as special disorders, to the utter neglect of the structural disturbance upon which they depend.

All these various effects of uterine disease sometimes require treatment, either in connection with the management of the radical difficulty, or after the lesion has been remedied.

The first, the most common and most persistent of the abnormal organic changes in the uterus, is that of engorgement. From this condition of the organ most of the lesions are supposed to take their origin. It is known by the increased size and weight of the uterus, as detected by digital examination, and by the feeling in the patient of weight—a heavy, dragging sensation in the pubic region when walking. Soreness on pressure, and in suddenly turning in bed, is felt by the patient behind the pubis. This state of the organ becomes more and more fixed the longer it is suffered

to remain, until the structure itself seems to be increased, amounting almost to ordinary hypertrophy. In the meantime, however, various lesions are liable to be developed.

As this condition leads to functional disturbance, to the displacement of the organ, and often to structural lesions, its discovery and treatment at an early period are highly important. Investigation with the speculum is not generally necessary to determine the existence of engorgement. To one at all experienced in digital examinations, the increased size of the os and neck may be readily discovered, and in this an engorged uterus may be distinguished from one impregnated. The enlarged os becomes harder and appears firmer to the touch, in proportion to the length of time this state has existed. In addition to the sense of weight, and tenderness on pressure or sudden movement of the body, protracted and annoying pain is often felt in the womb, sometimes in the ovaria. The uterus, when in this condition, doubtless has greater specific gravity than when it has attained to the same size from pregnancy, owing to the thickening of its walls at the expense of the cavity in the former, and the compactness of its structure from engorgement with blood. While this difference in weight in the two states may not always be detected by examination, yet that it exists is reasonable to suppose, and also that the prolapsus so frequently found in an engorged womb, would very probably result.

That which would seem to be the most rational course of treatment, and that which experience has proved most successful, is local depletion. The necessary quantity of blood to be abstracted may be more readily and promptly obtained by leaching. Two or three leeches may be introduced through a speculum and applied to the os, which, with the haemorrhage that usually continues after their removal, will draw a sufficient amount of blood for the time. This may be repeated, if necessary, in one, two, or three weeks, as may seem to be required. Scarification, though not equal

to leeching in many respects, may be of service. A few incisions in the edges of the os tincte with a suitably shaped knife will, in some cases, afford sufficient amount of depletion to relieve, in a measure, some of the attendant difficulties.

Cups and blisters to the sacrum or hypogastric region are sometimes serviceable, from the counter irritation and slight local depletion which they effect, particularly when much tenderness and irritability exist.

Chronic or sub-acute inflammation of the whole substance of the uterus, or of particular parts, is a very common lesion of the organ. It is found to some extent in most cases of enlarged or engorged womb, but sometimes without such condition accompanying or preceding it. We have intimated that the whole or distinct parts of the womb may be the subject of chronic inflammation. Where the whole organ is affected, local depletion such as advised in engorgement, and counter-irritation by blisters, &c., are useful measures. When the os and neck alone are inflamed, scarification and the cathartic effect of active astringents, such as sulph. copper, nit. silver, &c., generally give relief.

The most important, however, of these parts subject to the disease in question is the intra-uterine mucous membrane—important for two reasons: 1st. Because from its obscurity, when diseased it is very liable to be overlooked; and secondly, because of the difficulty met with in the application of suitable remedies. When affections of the womb are confined to this membrane alone, as is often the case, all that constitutional and local disturbance from reflex nervous impressions, in the forms of hysteria, dysmenorrhœa, &c., is kept up as in other forms of uterine disease; and yet, when uncomplicated, the speculum reveals no disease of the os or neck; nor do other modes of examination detect induration, or increase of weight or size. Under these circumstances, the practitioner is often perplexed in making his diagnosis and adopting the proper course of treatment.

From a more careful examination and enquiry, however, it will be found that there is a constant discharge of albuminous viscid mucus from the os uteri. By close inspection, a thin, almost transparent fluid, resembling the white of an egg, will be seen as it flows slowly over the edge of the os. This is generally, though not always, in quantity sufficient to be noticed by the patient as a "slight leucorrhœa." From this symptom, the disease has been called "uterine catarrh;" but we prefer the term chronic *Endometritis*, which conveys to the mind a definite idea of the true pathological condition. The fallopian tubes and ovaria are often affected by the extension of the inflammation.

In the treatment of this, as well as all other chronic diseases of the uterus, very little permanent benefit results from the *elective* action of remedies, or what is called "constitutional treatment." Temporary relief from local pain, and the sometimes troublesome nervous disturbance, is afforded by the various neurotics; but, as in other local affections of a chronic character, have no other permanent effect than the establishment of a troublesome habit.

The local application of remedies is that upon which the only certain reliance can be placed for correcting this abnormal condition. Nitrate of silver, sulphate of copper, &c., may be used in the solid form or concentrated solution, with great benefit in this way. The difficulty of applying the remedy in the solid form to the whole interior of the uterus, is an embarrassing circumstance in the treatment; and the violent symptoms sometimes produced by the injection of liquid cathartics into the cavity justly deters the practitioner from this mode of procedure, ordinarily. Violent pain, called "uterine colic," is occasionally the result, and for this reason, though the most convenient and effective manner of application, is not generally practiced. A stick of lunar caustic, arranged in a suitable port caustic, may be readily introduced so as to come in contact with the internal surface of the neck, but cannot very well be made to reach other

portions of the mucous membrane to any extent. The same difficulty is met with in the use of the probang with a sponge saturated with a strong solution of the nitrate of silver. Having the sponge made in a tapering form, however, and the end of a whalebone probang whittled down so as to be small and flexible, and let it penetrate the sponge longitudinally nearly its entire extent, the introduction may be effected when the cavity of the neck is of large size. Very little of the solution, however, reaches the surface of the body after being pressed through an ordinary sized canal.

For the introduction of remedies into the uterus, in any form, it is generally necessary that the os be dragged into and held in the speculum while the operation is made. A tenaculum, or forceps, with long slender shanks is necessary for this purpose.

The length of time between the applications should vary according to circumstances. Generally once a week the remedy should be applied; but, in some cases, once a month answers very well.

Another condition of the os uteri, about which a great deal has been said, is that of ulceration. In the opinion of the writer, however, this condition is very rarely met with. Slight abrasions are occasionally found when chronic inflammation of the os exists. Such do not have any characteristics of, nor can they be properly termed ulcers. The frequency with which this lesion is met with by some practitioners, while others rarely see it at all, is explained only by this common error in diagnosis. Ulcers are, however, sometimes found, penetrating even into the canal of the neck, and bleed upon the slightest touch. As they may be cauterized readily with the solid stick, they are generally cured by a few weekly applications of the nitrate of silver.

The embarrassing circumstances under which the practitioner labors in the treatment of uterine affections by the local application of remedies tend greatly to retard the cure. A correct diagnosis is not made in some instances until six

months of pretended treatment have passed. A delicacy on the part of the practitioner, as well as the patient, often interferes with the proper investigation until the affection, though slight at first, has become extensive and permanent.

ARTICLE III.

EUROPEAN CORRESPONDENCE.

PARIS, FRANCE, March 1st, 1868.

To Editors Atlanta Medical and Surgical Journal:

Among the classes that are compelled to seek relief in hospitals, it is well known the percentage of phthisis is large. These subjects, the offspring generally of serofilous parents, brought up in the most unfavorable and crowded portions of our cities, working in poorly ventilated shops during the day, and often compelled to subsist upon poor and insufficient food, fall easy victims to this scourge of the human race. Amidst the long and laborious researches in this field of medical science, from the infancy of medicine to the present day, it is unpleasant to have to confess that but little has been arrived at in the way of treatment—that the most we can hope for is to sustain the patient by good nutritious diet and exercise in the open air. That many indications do arise, in the march of this disease, where a timely and wise administration of drugs may not only alleviate suffering, but even prolong life, is nevertheless true. But even in this we are too often doomed to disappointment. For when digestion is bad, and the system fails to appropriate to itself an amount of aliment sufficient to sup-

ply the waste, the decline commences, and is more or less rapid in proportion as this function, the integrity of which is our only hope, suffers.

Of late years it has been a subject of remark that phthisis has greatly increased. My attention was recalled to this fact recently in looking over the report of the hospitals of this city for the year which has just closed. In it the reporter mentioned particularly the progressive increase of this malady from year to year, notwithstanding the theoretical and practical investigations which have been pursued with so much zeal. This report says that "out of 20 deaths registered in the service of M. Moissenet at the Hotel-Dieu for the month of November last, there were 15 from phthisis pulmonalis; and of 903 cases of tuberculosis, noted for all the hospitals during the months of November and December, 1867, there were 477 deaths—52.82 per cent! And this mortality is such that the number of deaths from phthisis pulmonalis is greater than the total number from all the diseases united." That this is not the result of accident—of the assemblage of an unusual number of these cases, but that it is the rule, is clearly shown by a comparison with the mortality of previous years. The percentage of deaths in 1866 was 51.47, and during the same year, while the cholera was raging in the city, its mortality amounted to only 31.77 per cent. This report further says that the "medium number of deaths which occur annually at Paris being 50,000, it can be safely said that 8,000, or one in six, die of phthisis pulmonalis."

This is a frightful record for the ravages of one disease. It calls loudly for therapeutic and hygenic measures to come to its relief. These frightful mortality tables seem already to have awakened here a new zeal in the investigations of this malady. It has been but a short time since M. M. Herard and Corneil have written a remarkable work on tuberculosis; in which, guided by the new principles of textual anatomy and pathology, they have brought into ques-

tion some of the doctrines of their predecessors. Scarcely had the interest in this production reached its height before M. Veillmain presented at the Academy of Medicine a new volume on tuberculosis, in which he takes the ground that this disease, like syphilis and glanders, is specific in its origin; in other words, that inoculation is essential to its production. The etiology of tuberculosis has been, at best but imperfectly understood—the most we have known being obtained from clinical information. But should the doctrine of the inoculability be established, it would give a new point of departure in future researches, and at the same time give origin to many questions, each one of which would have to be studied anew. It is due M. Veillmain to say that he has not arrived at his conclusions by accident, but that they are the result of a series of experiments on the lower animals, which, after being inoculated with tuberculous matter, presented uniformly and invariably tuberculous deposits in the lungs. This volume has created a very animated discussion in the Academy of Medicine of some two months' duration, and which is not yet terminated. It is combatted with great vigor by the majority. M. Herard, in his remarks, agreed with the author as to the inoculability of phthisis, but also asserted his belief in its hereditary and spontaneous origin. The discussion has taken a wide range as to the pathological appearances in tuberculosis, compared with those resulting from inoculation. But, from present developments, it is hardly probable that the nosological position of phthisis will be changed. The question evidently needs more study. Should his theory be entirely disproven, M. Veillmain will at least have the honor of awakening a new zeal in this direction, and of exciting the most interesting discussions in this body that has engaged it for a long time.

While the Academy of Medicine is thus busily occupied with the discussion of the etiology of phthisis pulmonalis, M. Montard Martin, candidate for the vacancy in the thera-

peutical section, comes forward with the result of his mode of treating this disease by arsenical preparations. From long trial and extended observations, his results lead him strongly to advocate its use in certain conditions of this disease. He deduces a number of conclusions from his researches, of which it will only be necessary to mention a few of the most important.

Its action, he says, "is much the most efficacious in phthisis, which is torpid and marches slowly, and which is unaccompanied with fever. On the other hand, when its march is rapid, and of the acute granulous type, this treatment does not appear to have a manifest influence."

He attributes a certain number of cures to this remedy, and believes they would be largely increased if the patients did not too soon think themselves cured and leave off the treatment. Again, he adds: "To be efficacious, it is necessary that the treatment should be long continued and the medicine administered in very small doses. It is never necessary to exceed two centigrammes."

In opposition to the opinions of some, his experience justifies him in affirming that arsenic is better tolerated by those who are somewhat advanced in phthisis than in those in whom the affection has just commenced.

During one of the recent meetings of the Academy of Medicine, M. Wurz announced that he has reproduced artificially, by a series of difficult and complicated chemical processes, *névrine* a crystalizable substance extracted from the nervous centres by Liebreich.

Within a short time, I have seen both M. Jarjavy and M. Goualin operate for oblique inguinal hernia. The former, in his observations preceding the operation, took occasion to speak of his practice when called to see these cases, in which, it strikes us, there is considerable merit. According to the teaching and practice of all surgeons in strangulated hernia, the first step is to attempt to return the viscera by taxis. Should this fail, our works on surgery recom-

mend it to be followed by chloroform, the warm bath, blood-letting, ice to the part, tobacco elysters, and, as a last measure, to resort to the knife. With this practice he takes issue. In common with surgeons generally, he in the first place tries the taxis. But just here the routine treatment is abandoned, and he brings together some facts which give strength to his position. After one *well directed* effort to reduce the hernia by taxis has failed, he says he invariably operates. And now for his reasons: In the first place, he believes the relaxing effects of these agents are overrated—that they are not superior to the relaxing effect obtained by position—approximating the knees and trunk. In the second place, their application consumes considerable time, during which the vitality of the constricted viscera may not only be compromised, but no doubt is often destroyed. While many cannot fully agree with him in regard to the feeble therapeutic effect of the remedies mentioned above, his position in regard to the delay from this routine use seems to be well taken. It is impossible for a surgeon to determine precisely how long an operation can be postponed without danger to the patient, which, if performed early, will prevent this result. Hence, he deems it a good precept to operate immediately after a *well directed effort* by the taxis has failed to reduce the hernia; and he fortifies this view by citing the favorable results of the cases of Beyer and Berard, the Elder, who adopted this rule. The former operated for hernia 36 times, and they all recovered; the latter operated 15 times, and had 13 recoveries.

Considering the gravity of this accident and the large number of unfavorable cases from it, these happy results strongly recommend this mode of practice to the favorable consideration of the profession. It may be urged, it is true, that this practice is too precipitate—that a trial of other means may do away with the necessity of an operation in some of the cases. But, on the other hand, it can be argued with just as much reason that the delay from their use may

cause sloughing of the constricted part, with all its evil consequences. Hence, we are strongly persuaded the success attending an early operation should be borne in mind. M. Gosselin, in his remarks, was equally decided in favor of an early operation, only recommending the use of chloroform in addition to the taxis.

The method of treating that most troublesome of all affections—stricture of the urethra—by galvano-caustic, first brought into notice by Cinicilli, has received a new impetus in the hands of M. M. Mallez and Tripier. Their manner of application differs from that of Cinicilli, and they claim that their cures are permanent, as the resulting cicatrix is not retractive. How many plans of treatment will be invented for this trouble it would be difficult to say. That of caustics of gradual and forcible dilatation, and that of urethrotomy, etc., have each in its turn given brilliant hopes, and at first been crowned with marvellous success. Many, too, have been the essays written on these different plans. A multiplication of remedies and essays on the treatment of any disease furnishes one of the very best evidences of its intractable nature, if it does not demonstrate its incurability.

The manner of applying the galvano-caustic by Cinicilli we will briefly indicate, and afterwards that of Mallez and Tripier. The salt which composes the caustic of Cinicilli is placed in the circuit of an electric battery and brought in contact with the organic tissue which it is proposed to cauterize. The effect of its action on the tissue is regulated at pleasure by increasing or diminishing the current which sets free the acid and alcali composing the salt.

M. Tripier was the first to demonstrate the difference of the action between the two poles—the one setting free the acid, the other the alcali. He discovered that the alcaline caustic left a soft cicatrix, not contractile, and that the acid caustic gave a cicatrix resembling that from a burn, and very contractile. The negative pole, around which the alca-

line caustic is attracted, he established, gave the cicatrix of the alkaline caustics, and the positive pole, which attracts the acid, that of the acid caustics. It therefore became clear that to produce the soft cicatrix it would only be necessary to employ the negative pole and dispense with the use of the salt. Its effect will be more or less rapid in proportion to the strength of the current, and, unlike many caustics, is limited to the point of contact. The electrode of Mallez and Tripier consists of a coil of metal conducted to the stricture through a bougie which protects the canal.

The surgeon being on the right of the patient, the inner part of the left thigh is covered with several disks of argaric moistened; the positive pole terminating in a piece of charcoal, is secured in the midst over the argaric to the leg. The negative pole is then introduced through the bougie, and its extremity brought in contact with the stricture. When the current is turned on this pole, the extremity of the electrode is brought in contact with the stricture and made to cauterize in front, behind, and at the sides, taking care not to allow the point to project too far through the sound, until the obstacle is overcome and the sound passes.

Thirty-one cases have been thus treated by these surgeons. One of them, going to work immediately after the operation, was attacked with fever and died. But this is in no way attributable to the treatment. The others are represented as being permanently cured. In some, the time of operation dates as far back as two years without return of stricture. It is believed that the agent has the effect of causing the absorption of the interstitial deposit around the seat of stricture.

W. S. ARMSTRONG, M. D.

ARTICLE IV.

PARIS, FRANCE, December 26th, 1867.

Dr. John M. Johnson:

DEAR SIR—For several days past I have been making a general tour of the Hospitals and private cliniques of Paris, in company with Professor Armstrong, your very clever countryman of whom I spoke in my last; and I hope the account which I am about to give you of some of the things I saw and heard may interest you, though I have little expectation of affording you much valuable information. Let me say, *in limine*, that there is one most remarkable and culpable picture in hospital management here, which I have observed in all the institutions that I have visited—namely, that small pox patients are not separated from the other sick, but lie side by side with the subjects of ordinary diseases; although its contagiousness is doubted by no one. Cholera patients, on the other hand, are isolated; while its communicability by contact is by no means a universally received opinion. Seeing pregnant women and little children thus constantly and cruelly exposed to this loathsome contagion, I asked, Why is it that small pox is brought in this way so near to those who may be subject to it? “Routine,” was the reply of the Interne. “It has been the custom from time immemorial, and it is tedious and troublesome to effect any change in the hospital regulations; for hospital affairs, like almost all other affairs in the Old World, are in the hands of a circumlocution office, through which business moves slowly. The old, according to the proverb, learn new tricks with difficulty.

On my last visit to the St. Louis I saw Hardy injecting corrosive sublimate into the arm of a patient with secondary syphilis by means of the hypodermic syringe. I am sorry I am not able to give the result of the treatment. At the Hôtel Dieu a favorite treatment for ophthalmia neonatorum is the hourly injection of simple warm water into the eyes.

For acute rheumatism, laudanum on cotton batting, in which the part is well wrapped, is a practice much used here. Very little of the fluid is absorbed by the batting. The part is kept very warm, and local transpiration thus augmented. Doubtless, in chronic rheumatism, the remedies would act equally well.

A few days since I followed Maisonneuve through his wards, and afterwards attended his clinique in the hospital Amphitheatre. He treats erysipelas by blisters applied directly to the diseased surface. His doctrine is, that erysipelas depends upon a morbid agent in the blood, to which nature is endeavoring to expel, and by a blister we afford the ferment an opportunity of egress. He treats suppurations by the exclusion-of-air plan. A gumelastic bag is fitted on to the stump, and from the closed end of the bag a tube is connected with an air-pump, and the air is thus drawn off. He has no case at present under treatment, and I have not seen the process applied. It is claimed for it that it prevents suppuration; but this, I believe, is doubted. The method by acapressure is in every respect so far superior to it that I won't describe the plan of M. Maisonneuve more fully. He treats fractures by dressings with plaster of Paris. You have, for example, a fractured tibia or fibula; four or five pieces, or more, of cotton cloth a foot wide, and capable of reaching from above the knee to the foot, are saturated with a mixture of the plaster and water, and then applied to the limb, having first folded each piece of cloth four times. One runs from above the knee in front down to the instep or toes. Then side pieces are adjusted—two or more, as you deem necessary. A roller bandage is then quickly applied from the toes up above the knee. In eight minutes the dressing is firm. You may then remove the bandage and apply a few adhesive strips where they may be needed to keep the splints in place. No cotton batting is used by Maisonneuve. In other hospitals the plaster of Paris dressing is applied with the many-tailed bandage; or

ordinary roller, and padding is employed. The method of M. Maisonneuve strikes me as the preferable one; but I leave the question to be decided by the surgeons.

M. Maisonneuve is a short, big-bellied, pug-nosed man, and looks like an ugly, fat old woman. He speaks clearly and majestically, but not rapidly. At his clinique he operated for fistula in ano, hemorrhoids, and stricture, and removed a female mamma. In only the last of these operations did he administer chloroform. As a surgeon, he is slovenly and rough, and his patients wince as he approaches them.

While waiting for Dr. Jarjavy at the Hospital of the Cliniques, to go through the wards with him, a few days since, I took a hasty survey of the lying-in room, which is always open to students, and saw there a woman in the pangs of childbirth. On either side, at the patient's knees, stood a young female, apparently friends of the woman. Near by was the *Sage Femme*. The legs of the patient were flexed, and a blanket was thrown over them, but so as to leave exposed to view the whole process of parturition. As I entered the room, with several others, the young girls blushed slightly, and looked as if their modesty was a little shocked, but the soon-to-be mother showed no signs of embarrassment.

At La Charité, Gosselin is a favorite with students, and from fifty to sixty follow him daily in his rounds. Amongst the students, I was astonished to see a female, and on inquiry learnt that she is a country-woman of ours, from New York, or Boston. The young woman is not more than eighteen or twenty years of age, and is by no means ill-favored. French students are no respectors of even female persons, and their fellow-student in petticoats is pushed and crowded about by them just as though she had worn pantaloons. She seems to be an earnest student, but is lady-like and modest in her demeanor. I was glad to see that she stood back during the introduction of catheters,

and the examination of gangrenous penises, cancerous testicles, etc. I wonder that she does not devote herself exclusively to Obstetrics. Both in London and in Paris there are women who stand high in the profession as Obstetricians, and the time will doubtless come when we in America shall confide that business entirely to their hands. We may never consent to female suffrage, but I expect to see the day when we shall allow the women to bring out all the voters, and their sisters.

M. Gosselin employs the silicate of potash instead of plaster of Paris, in dressing fractures. It is used of the consistency of syrup, and is put on like starch or the plaster. The objection to this material is that it requires two hours to acquire any firmness, and two days to become perfectly hard. On this account it seems to me inferior both to starch and the plaster of Paris.

I am charmed with Roger and Bouchest, at the Children's Hospital. Bouchest is fully six feet high, erect and graceful, and in his elasticity of manner reminded me of Dr. Gross. Roger is a diminutive, round specimen of a man, not more than five feet two, and the gentlest mannered man at the bed-side that I have ever seen. He patted, and fondled, and soothed his little patients as you see tender mothers do their sick children, and whenever he had occasion to disturb or fatigue one of the little sufferers by a more than usually tedious examination, he rewarded it with pennies. As a lecturer he is remarkably humorous, and constantly excites the laughter of his students. In the sick room, he is soothing; in the lecture room he is sparkling.

I have heard lectures from Depaul and Jarjavy at the Hospital of the Cliniques, Maisonneuve Roger, and Gosselin at the Hotel Dieu, La Charité, and the Children's Hospital, and heard Bazin, Hardy, Tardieu, Bonchest, Vermueil, and others, at the bed-side. All are fluent speakers. Their ease and grace of manner make it a pleasant task for students to listen to their lectures. In point of utterance they

are incomparably superior to their English brethren, who, certainly, of all the intelligent people I have yet encountered, have the poorest use of their mouths. The power of the English physicians is in their pens.

Of the Eye Cliniques, Desmarres' is the finest that I have seen. Desmarres is an exceedingly handsome young man, about thirty years old, a showy operator, and, like all his countrymen, a fluent talker. I saw him examine and prescribe for a hundred cases, and operate for three cataracts, in two hours. He everts the lids with his left hand alone, and does it almost as quickly as he could snap his fingers. Galayowski, a delicate little pole, earnest and clever as a teacher, and Liebreich, a sickly looking, but pushing, live young Frenchman, both have excellent Eye Cliniques.—Fanvell's Throat Clinique is an exceedingly fine one. He uses the Drummond light in his laryngoscopical examinations. I saw him remove two small polypi from the vocal cords. He is a good talker, and wonderfully polite and attentive. Besides these, there are many other Cliniques and Hospitals in Paris, of which I have not now time to speak, if my letter had not already grown too long.

Very truly yours,

L. P. YANDELL, J.R.

ARTICLE V.

The Sulphites in Typhoid or Enteric Fever. By R. S. CROSS,
Esq., M.R.C.S., L.S.A.

I beg to lay before the readers of *The Lancet* an account (abridged as much as practicable) of an outbreak of typhoid in the neighborhood of Petersfield, during the autumn of

1866. Its history commences with the return of a family from Mentone in the first week of July, one member of which, a little boy seven or eight years old, was only just convalescent from an attack which had kept him there far into the hot season. From all I could gather, the disease was of a much more virulent kind than is usual in this country, the condition of the patient having been, in the later stages more especially, like that observed in low typhus; his father described the state of his tongue and mouth as if a coat of varnish had been applied and allowed to dry on it. Almost in despair of recovery, he was started homewards, and the change appeared to produce immediate improvement; for, although the weather was intensely hot all the way, and in London, where he remained a week after his arrival in England, he got home quite recovered. On the 27th we (Mr. Whicher and myself) were called to the lady's maid, a thin, weak-looking woman of about forty. Her symptoms were referred to the heat and fatigue of the journey after long watching and nursing at the bedside at Mentone. At this time, the end of her first week's indisposition, I confess to have had some suspicion of the true nature of her malady—a suspicion abundantly confirmed by the appearance of the same symptoms in the lady of the house a week later, in two of the maidservants at the end of another week, and then the gardener's wife (who had been called in to assist in the kitchen,) and also in the cook, butler, and others of the household—seven in all.

To go on with the history of the progress of the malady. At the end of six weeks, a woman from the parish, who had volunteered to wash the clothes in a cottage at the end of the garden, failed with it, and it was discovered afterwards that some blankets she had washed had somehow escaped disinfection. Three of her children took it in succession; then a man, his wife and five children, in a cottage some three hundred yards from where she lived, and so it spread; in all about thirty cases occurred, from the age of three to seventy-five. Most of the cases were very severe ones, the largest number appearing to have the malady in the most intense form. One boy, about nine years of age, in particular, had to learn to talk, etc., and seemed imbecile for some time. The aggregate duration of all the cases was ninety weeks.

The symptoms ushering in an attack were a worn expression of face, a sort of pinched look, great lassitude, pains in the head, back, and limbs, sometimes rigors, almost invariably diarrhoea, either with or without pains in the stomach and bowels, nausea or active vomiting, total loss of appetite, some thirst, sleeplessness, pulse quick, ranging between 90 and 120; tongue varying with the intensity of gastric symptoms; where active would be covered with a yellow coating, edges and tip dark red; where less intense, looked sodden, large and white; always tremulous; and this condition, together with the quick pulse and worn look, often existed many days, and almost weeks, before the patient complained very much, or gave up and took to bed. Nothing varied so much as the character and duration of the premonitory stage.

In one patient, the lady of the house, there was positively no warning. She became paler than usual, and so rapidly weaker and weaker, that on the third night of my attendance upon her, with a perfectly clean tongue, without diarrhoea or sickness, and in the entire absence of any dread of the disease, she was only saved from sinking by the unsparing use of brandy (two-thirds of a bottle this night), and such was the character of her illness throughout.

In another case, that of a stout plethoric girl of eighteen, the malady was ushered in suddenly by symptoms of most active biliary disorder, soon followed by the wildest delirium, requiring restraint for many days to keep her in bed even; both lung and intestinal complication following in the progress of the case, which was very long and doubtful. In many cases, the tongue was for days together dry and hard like toast, abdomen tympanic and tender, and the lungs the seat of frequently recurring congestion, engorgement and solidification, or whatever term may best describe a condition in which a very large portion of either one or both of these organs is often perfectly useless, if not worse; sore mouth, bleeding from the fauces, tongue, and gums, loss of the almost entire mucous covering, with deep ulcerated fissures, constituted a dreadful aggravation of suffering in numerous instances. The treatment up to August 19th had been such as is usually followed. In every case where indicated, a single dose of calomel, or an emetic, was administered at the outset, and always with advantage. At this period, not being much impressed with a belief in the

power of any known mode of ordinary treatment to do much in combatting the disease, and not daring with six or eight people about me as good as dying to adopt the do-nothing plan, I determined to try the sulphites, the more especially after a careful perusal of the very able and exhaustive article from Dr. de Ricci in *Braithwaite's Retrospect*, vol. 49. I prescribed the sulphite of soda in scruple doses every four hours in water, adding for the most part quinine in grain doses as the purely gastric symptoms disappeared and were followed by the toast tongue, and other signs of greater encroachment on the vital powers. There was a liberal, very liberal, allowance of wine, brandy, and beef-tea given, and the quantity taken every twenty-four hours by most of the sufferers was truly astonishing. We had two good nurses from the Institution in London, besides other help. It was just pouring down the three things before named day and night to keep the flickering lamp of life alight; and, without a single exception, just in proportion as the hand was stayed from any cause, either accidentally in the nursing so many, or in obedience to an order from me, based on some fear or suspicion of over stimulation, so did the jeopardy of the patient immediately increase, and time and again it seemed hopeless that the fuller use of the brandy bottle could be in time to snatch the sufferer from the jaws of death. Some took a bottle of wine every twenty-four hours for three weeks at a stretch; and the way in which this was freely placed at my disposal by the fearless, intelligent master of the house, together with the champagne, ice, grapes, and everything that could be thought of, elicited my admiration, as much as his tact, discrimination, and appreciation of symptoms at the bedside by day and night, deserved my warmest thanks, as the greatest possible help in the management of such a visitation.

In the treatment of the diarrhoea, or, more properly speaking, the repeated loose action of the bowels, which was such an invariably prominent accompaniment, I did not adopt either the astringent or castor-oil plan in their entirety. Whether or not the increased action in question be due to the elimination by the glandular and mucous apparatus of the intestinal tract of a morbid poison from the blood, or the disease itself consist a primary affection of a specific kind, true it is, practically, that in every case there is, to begin with, a most serious invasion of the powers of

life; and the cardinal point in treatment is not to allow the patient to either do or suffer anything whereby the jeopardy arising from this great exhaustion might be increased, at the same time avoiding a too active interference—an interference, I mean, amounting virtually to arrest of what, up to a certain point, may be a salutary process, and can be after all but one of many circumstances adverse to life. I prescribed now and then an astringent mixture, containing a small quantity of laudanum—in fact, the nurses were allowed to give a certain quantity of it to restrain a little when the actions were very frequent, particularly when occurring immediately after taking support of any kind. I am no stranger to the value of a dose of castor oil under some peculiar conditions of distended abdomen, etc.; but it is so nice a point I verily believe a patient's life often hinges upon the fine discrimination as to its immediate applicability to the case under observation. Turpentine stupes were always going either to the chest or abdomen; and they seemed as valuable in one place as the other, never failing to relieve alike the over-burdened and sometimes painful lung, and the distended, flatulent, and uneasy belly. The subject is practically inexhaustable; but I will bring this part of my remarks to a close by saying that there was, with the exception of the patient verging on eighty, who had the fever after nursing her daughter and family for weeks, and who finally succumbed to bed-sores, no death.

I also used the sulphite as a prophylactic; a bottle of mixture was established in the house, and given in scruple doses three times a day to five people. Of these five one was the constant attendant on the lady, two were in the kitchen, another was a keeper, who came in and out, and the butler. The attendant, though in the sick room night and day for weeks, never ailed anything. Of the two in the kitchen, one never ailed; the other, the cook, who was always running in and out the sick rooms, had all the symptoms of the malady,—the worn look, the sickness and purging, loss of appetite, quick pulse, characteristic tongue, etc., but never gave in; used to lie down and get up, but never was absent from her post a day. The keeper, the husband of the woman who took it by washing, was less affected, and also kept his post. The butler hung in the balance for a fortnight or three weeks, then took to his bed, and was among the worst.

Much as I believe it, I am hardly in a position to assert as much, but my experience powerfully endorses the opinion expressed by M. de Ricci in the *British and Foreign Medico-Chirurgical Review*, April, 1867, p. 523, wherein he predicts "that eventually the treatment of zymotic diseases by the administration of the sulphites will be as fully recognized as that of cinchona."

All I trust is, that after a careful perusal of this paper, I shall not be thought to have intruded these very imperfect and crude observations (recorded necessarily in the midst of much to divert) altogether uselessly upon the notice of my professional brethren, to many of whom an opportunity for making a similar trial may not only never have occurred, but be long wanting.

To proceed. On July 30th, 1867, I was requested to see Miss—, aged twenty, residing at a distance of eight miles in a country house, the inmates of which were, and always had been, particularly healthy. I was told it was the third day of her being in bed, and the history of the case pointed simply to more manifestation of fatigue of late, in the face, it is chanced, of more than usual call and inducement for exertion. A dose of oil had been given three days prior to my visit, and had done well. On entering her room, the position in bed, her manner and appearance, voice, and expression of face, all reminded one of the impression of fever. The pulse was weak and quick, over 100; tongue sticky and coated; breath offensive; no appetite, bowels uneasy, somewhat fuller and more tense than natural; no action since that from the oil. She was unable to sit up in bed without help, or to remain long so without faintness. Ordered to take ten grains of sulphite of soda every four hours, and pills at night containing a mild dose of mercury with chalk, rhubarb, ipecacuanha, and hyoscyamus. To have beef-tea; claret-and-water to be given freely as a drink.

July 31st (next day)—Condition essentially the same, but weaker; pulse quicker. Ordered claret without water. Pills had acted twice; feared to repeat them in the face of so much exhaustion. To continue the sulphite.

Aug. 1st.—Much worse in every respect; pulse almost too quick to count, and the tendons of the muscles of the forearm were felt to twitch constantly under the finger, strongly enough to be seen also in other muscles; abdomen more distended, and slightly tender on pressure. Ordered turpentine

stupe, a tablespoonful of brandy every hour in arrowroot, beef-tea, etc. Sulphite to be continued. Bowels rather relaxed.

2d—Much the same; in danger of sinking from hour to hour. Brandy increased to six drachms every two hours and the other two; two ounces of port wine to be given; beef-tea; sulphite continued. Bowels the same; slight cough. Remained the night.

With very little alteration, this condition prevailed up to the 9th, when, the bowels acting rather more frequently than I liked—the ingesta quickly passing through, almost unchanged,—I ordered a pill at night, containing half a grain of opium, half a drop of creasote, and one grain of camphor.

The chest symptoms had fairly set in, there being complete dulness on percussion and entire absence of respiratory murmur over the lower half of left lung, with slight pain, and that coarseness of breath-sound on the right side which I have noticed to be the sure forerunner of that alteration in the lung tissue which occurs in connexion with the disease in question, as well as not unfrequently constituting a separate and distinct malady. Both sides of her chest were thus affected, and the turpentine stupes were applied again and again, always with marked benefit. The abdominal symptoms had appeared to decline from the first application of turpentine, and especially from the date of appearance of chest symptoms; nor had the tongue been dry and baked for more than twenty-four hours before time sufficed for getting the system under the influence of the maximum quantity of stimulus. The creasote-and-opium pills were given occasionally, eight in all.

At this period—the end of the fortnight—an ounce of the sulphite in all had been taken. And with regard to the time of its continued exhibition, I am disposed to think it should be dependant on the period of the malady at which it is begun, and the power it manifests to control the progress of symptoms. M. de Ricci says that “the want of success which has sometimes been observed in the treatment of zymotic diseases by the alkaline and earthy sulphites is attributable to the fact that these remedies have not been administered early enough. If the treatment is too long delayed, the blood becomes so loaded with poison and deteriorated in quality as to be no longer able to perform its

normal function ; and then the sulphites are of no more service than any other remedies, because they cannot restore to life the dead blood-corpuscles. The sulphites should, therefore, be administered early, while still a large portion of the blood is in a healthy state, and capable not only of carrying on life, but of throwing off what has been rendered inert by the presence of the sulphuric acid." M. de Ricci attributes another source of failure to "the administration of hyposulphite of soda instead of the sulphites, and especially the sulphite of magnesia. The hyposulphite of soda is less efficacious than the sulphites, because, in the former, the greater part of the acid becomes oxidised in its passage through the animal economy, and appears in the urine as a sulphate ; because, being a salt of hyposulphurous acid, it is a less active antagonistic ; and because it often causes a troublesome diarrhoea : while the sulphites of soda and magnesia never produce such effects." And so on in the article in question.

To return to my patient. I discontinued, then, the sulphite at the end of the fortnight, and ordered a mixture of chlorate of potash, ammonia, cinchona, and chloric ether on the 14th, which was continued to the 20th. Somewhat later than this, the pulse having improved, and finding her at my visit somewhat flushed, feverish, and excited, I ventured to diminish one-half of her stimulants ; but I was only too glad to put it on again the next day, and lost three days most certainly by the experiment. And it appears to me most important to be very cautious about reducing the allowance of wine, etc., allowing the patient to sit up in bed or make any exertion, or to take solids too soon. Castor oil was given twice : the first time at the end of a month from the time of her attack ; and she was able to be down stairs and take carriage exercise at the end of six weeks, from which point her recovery was rapid and complete.

The other case I was called to on September 15th. I will be brief with it. A young man of twenty, stout, florid complexion, was a draper's assistant at a neighboring seaside town. Had been ill three days. He was prescribed for, the medicine purging him freely. Had been ill a week altogether at the time of my being called to him after his removal home. He had all the symptoms of a severe attack of the fever in question. The lung complication was thus early extreme on both sides. He became breathless on the

slightest exertion, and almost fainted on my attempting to set him up to examine his chest posteriorly. Ordered turpentine stupes, sulphite, beef tea, wine, etc. The case went on to the 27th, when he got rather suddenly much worse, I believe from neglect in the administration of support and stimulus. He was restless, with wandering delirium, dilated pupils, confusion about the head, etc. The mouth and fauces were covered with a thick coat of aphthous exudation. These parts were sponged out well with a solution of the baborate of soda, the hair was removed, and a mustard plaster applied to the nape of the neck ; and he was ordered to take in the course of the next twenty-four hours a bottle of wine, and a tablespoonful of brandy occasionally. The next day he was much better in every respect, and continued to mend from that time, making an excellent recovery, and passing out of our hands well on the 16th of October : just one month ill. He took in all two ounces of the sulphite.

I could give a later case, in which the very early use of the remedy seemed to cut short the malady, and reduced the term of indisposition to but a fortnight altogether ; but I forbear, having already, I fear, trespassed at too great length.

I should have mentioned that in all cases I had Burnett's solution kept in the utensils used by the invalids, these being used immediately after use. Chloride of lime was kept going under the beds, and about the rooms and passages. I insisted on as much air as could be got, without placing the patient in a thorough draught. One of the quickest and best recoveries of the very bad cases occurred in the gardener's wife, whose bed was so situated (in a small room without a fireplace) that the wind blew in at the window upon her day and night ; another, the boy before alluded to, the window of whose room was clean gone, a sack hung up doing duty for one, but which I often found down, admitting the wind, and sometimes the rain, on to the little fellow's bed, which was shared by a brother ill of the same disease.

I would observe, in conclusion, that to many the foregoing remarks may read more like an advocacy of the ultra-stimulating plan of treatment than that by the sulphites. To such I would say is it not necessary in all maladies to maintain the powers of life in such a way as shall give time and opportunity for remedies to take effect ? and is not the de-

gree of energy with which this support is applied in direct proportion to the patient's need? The quantity of stimulus must not be measured by spoonfuls, but by the observation of how much is required to keep the patient alive and in a likely condition to be benefitted by all other adjuvants, chemical and otherwise.—*London Lancet.*

Petersfield, Dec. 1867.

ARTICLE VI.

An Address on the Present State of Therapeutics.—Delivered at the Opening Meeting of the Clinical Society of London.
By Sir THOMAS WATSON, Bart., M.D.

I am very sensible of the great honor which you have done me in electing me the first President of the Clinical Society. Reluctant as I not unnaturally am to assume at my time of life any fresh duties or obligations, I yet must confess that I have extreme satisfaction and pleasure in accepting at your hands this new office; for the Society which we are founding to-night seems to me well calculated gradually to bring about that which, in my judgment, is the thing most needful at present amongst us. I mean more exactness of knowledge, and, therefore, more direct and intelligent purpose, and more successful aim, in what is really the end and object of all our labors—the application of remedies for the cure or relief of disease. Certainly the greatest gap in the science of medicine is to be found in its final and supreme stage—the stage of therapeutics. The anatomy of the human body is sufficiently well known. Its material pathology, also, under the auspices especially of a sister Society, has been, I will not say completely, yet very amply and fruitfully ransacked, by the diligent scrutiny and study of the dismal but instructive revelations of the dead-house. I say its *material* pathology, for the condition of doctrinal pathology must necessarily partake of whatever

imperfection may be found in the correlative science of physiology. Again, we have attained to a great degree of certainty in the detection and discrimination of disease in the living body. We know tolerably well *what* it is that we have to deal with, but we do not know so well, nor anything like so well, *how* to deal with it. This is more true, no doubt, in the province of the physician than in that of the surgeon, but it is lamentably true in both provinces. We want to learn distinctly what is the action of drugs, and of other outward influences, upon the bodily organs and functions,—for every one now-a-days I suppose, acknowledges that it is only by controlling or directing the natural forces of the body that we can reasonably hope to govern or guide its diseased actions. To me it has been a life-long wonder how vaguely, how ignorantly, how rashly drugs are often prescribed. We try this, and, not succeeding, we try that, and baffled again, we try something else; and it is fortunate if we do no harm in these our tryings. Now, this random and hap-hazard practice, whenever and by whomsoever adopted, is both dangerous in itself, and discreditable to medicine as a science. Our profession is continually fluctuating on a sea of doubts about questions of the gravest importance. Of this the evidence is plentiful and constant. Let me substantiate what I am now saying by one or two glaring instances. The old, and, as might have been hoped, obsolete controversy between the Cullenian and the Brunonian schools has been revived in all its former extravagance within our own time. Many of us can recollect the period when bloodletting was reckoned the *summum remedium* against at least all forms of inflammatory disorder—which were to be starved out also by the strict enforcement of what was called the antiphlogistic regimen. Now, there are, I believe, many who yet hold that to deprive a patient of an ounce of his blood is to sap his strength and to aggravate his danger; and that for all ailments brandy is the grand and easy panacea. One generation extols mercury as the sole and unfailing remedy for syphilis; the next attributes all the worst evils that follow in the train of that hateful disorder to the very mineral which had been administered for its cure. Even now, at this present time, a hot contention, of most weighty import, fills the air around us, upon the question whether, when cholera is present in the community, we should treat the diarrhoea, presumed to be the

prelude or the commencement of cholera, by opium and astringents to check the discharges from the bowels, or by castor oil to promote them.

I say this uncertainty, this unseemly variation and instability of opinions, is a standing reproach to the calling we profess. It has shaken the faith of many men, of men both able and thoughtful, and driven them to ask themselves whether any kind of medication, other than the *vis medicatrix naturae*, is of any real efficacy or value. Well, this is one of the questions which it will be competent for the Clinical Society to settle.

In order to clear the ground for correct observation, and in order to the avoidance of fallacies in observing, it is most desirable, when it can be done without harm or known hazard to the sick, to learn, respecting all distinct and recognized forms of disease, what would be their course, what their tendencies, what their results, if left to themselves and subjected to no kind of remedial treatment whatever; to ascertain, in a word, what it has become the fashion to speak of as the *natural history* of disease. For this purpose, again, the Clinical Society may be expected to furnish help. Truly, there are diseases in which it seems to be our main business to stand by and look on; to see that Nature has fair play; that the patient has the requisite advantages of rest, and warmth, and pure air, appropriate food, and no more; to watch his recovery, not to attempt his cure. Probably all the specific fevers that run a definite course are of this kind. Medicine needs to step in only to redress some untoward deviation from that regular course, or to facilitate and fortify the natural recuperative efforts. But there is a legion of other disorders for which rest, and warmth, and pure atmosphere, and well adjusted diet, are *not* sufficient. There *are* cures as well as recoveries; and there *are* remedies that are equal to the cure. Still, of therapeutics as a trustworthy science, it is certain that we have as yet only the expectation. The influence of drugs upon the bodily conditions of health and disease is, indeed, most real and most precious to us. And some of them, in our contests with disease, we have learned to wield with much confidence and success.—Who can doubt the efficacy of opium and of anæsthetic vapors in blunting the sensibilities of the body, and so quelling pain? No one questions the marvellous power of quinine to stop malarious fevers and other periodic complaints,

or of the iodide of potassium to eliminate from the body, apparently by first dissolving them, certain poisonous or hurtful elements. The rough yet sanative effects of emetic and purgative drugs are notorious to all. But there is a host of other known or reputed remedial substances—to say nothing of a further host, no doubt, hitherto unthought of and unassayed—about which our practical knowledge is very loose, and imperfect, or even misleading. Concerning the peculiar virtue and specific agency of each and all of these, present and to come, we want sound and multiplied experience. There is no other way. The required knowledge must needs be gathered empirically, and by many hands. And while there are many drugs and medicaments yet unproven, there are also many shapes of disease of which the true nature and origin are still disputed or doubtful. Of all these matters will this Clinical Society—if I rightly apprehend its scope and purpose—take cognisance. Full and faithful descriptions brought before it, by competent and accurate observers, of the symptoms, circumstances, and progress of disease in the living body, and of its behavior under treatment by medicines prescribed with singleness and simplicity, and a definite aim and object, or sometimes, it may be, of its behavior under no treatment at all—authentic reports of trials with medicinal substances upon the healthy human body,—contributions of this order, multiplied in number, compared together, contrasted, sifted, and discussed by a variety of keen and instructed minds, of minds sceptical in the best and true sense of that word,—must lead at length, tardily perhaps, but surely, to a better ascertainment of the rules—peradventure, to the discovery even of the laws—by which our practice should be guided; and so bring up the therapeutic and crowning department of medicine to a nearer level with those other parts which are strictly ministerial and subservient to this. And I think I do not entertain an extravagant expectation of the results of the formation of this Society when I express my belief that, if wisely and strictly managed, it will hereafter be spoken of as the starting-point of a vast and solid improvement in that which is our special office in the world—the scientific and intelligent exercise of the divine art of healing.

ARTICLE VII.

WOOD'S OPERATION FOR RADICAL CURE OF HERNIA. By BENJAMIN HOWARD, M. D., Lecturer on Operative and Minor Surgery in the Medical College of the University of New York.

From successive observations of the progress of several of Mr. Wood's patients, I was induced to avail myself of the first opportunity of performing his operation for the radical cure of hernia.

The following observations are chiefly concerning the manner of prosecuting one only of the several steps of the operation. The inferences respecting the general value of the operation, if indeed such could be allowed from what is here exhibited, are, I think, clearly favorable.

July 18, 1866, I performed this operation upon Timothy Sullivan, a healthy laborer, aged 25, for an oblique inguinal hernia of the left side, its first occurrence dating back about two years prior to the operation.

Although the hernia was not large, its inconvenience was such as to render the patient anxious for the operation. With the assistance of Dr. Hackley, of the New York City Hospital, and others, the patient was etherized and the operation performed; the needle and wire, with the use of which I had become somewhat familiar through the frequent kindness of its author, were bought from the maker employed by himself. No obstacle was encountered in the steps of the operation; but when about transfixing the fascia in front of the cord, I felt a little undecided which of the two methods of doing it described by Mr. Wood to adopt. The first is as follows: "The sac of the hernia and the fascia covering it opposite the scrotal aperture is then pinched up between the finger and thumb, and the spermatic cord is slipped back from their grasp, from without inward and a little upward in the direction of the incision across the scrotum, close to and in front of the spermatic cord; a slight twist given to the point of the needle will enable it to take up all the structures which lie in front of the spermatic cord, and at the same time to enter and emerge entirely within the limits of the scrotal incision."

The other method is: "In still smaller cases, wherein the sac does not descend much beyond the external ring, the

last step of transfixing the fascia must be performed nearer to the insertion of the pillars of the ring. In accomplishing this manœuvre, the needle may also be made to take up a portion of the pillars themselves close to their respective insertions on the inside of the spermatic cord. The crest of the pubis will afford a good guide and protection to the deeper parts, the point of the needle being made to slide close to the bone."

As this case corresponded to the class last mentioned, the transfixion was effected as therein directed, care being taken to make the point of the needle "slide close to the bone."

The wire was now in situ, crossing itself and transfixing the parts as the operation requires, the free dependent ends were twisted upon each other, and all was ready for permanent invagination.

It was here I encountered the difficulty I had feared might arise. The fixation of the parts effected by making the "wire slide close to the bone" and "take up also a portion of the pillars themselves close to their insertions," arrested the progress of invagination, making its completion impossible, and the last attachment of the wire could not be drawn up into the canal so as to plug it throughout its course.

This is the point to which I would call the attention of those contemplating this operation; and, in order that they may be spared the same difficulty encountered by myself, I would advise the adoption of the first of the two methods above described, in transfixing the sac or the scrotal tissue in front of the cord.

Though strongly inclined to withdraw them, the wires were left as placed. The operation was completed, and the wound dressed in the usual manner.

Between the second and fourth days there was more local inflammation and general disturbance than I had observed in any of Mr. Wood's cases in King's College Hospital. This was doubtless largely owing, however, to the circumstances; the patient being confined in a small apartment having a temperature at midday of 102 deg. Fah. for several days in succession, and swarming with flies and mosquitoes.

As the patient insisted that the presence of the wires was the sole source of all his discomfort, I yielded to his importunity and removed them on the fourth, instead of about the tenth day after the operation.

I regretted this circumstance very much, fearing it would deprive this, the first operation of its kind in the city, of its chief advantages. In this regard, however, the results disappointed my apprehensions.

After removal of the wire, there was considerable suppuration and tenderness, both of which daily diminished, so that at the end of two weeks the patient began to come to my office, the wound was nearly healed his general health and spirits were good, and he felt great confidence in the success of the operation.

He called again six weeks after the operation, and stated that he had been at work at coal-heaving. I tested the parts thoroughly, but could procure no sign of impulse; the course of the canal felt as if occupied throughout by a hard cord.

September 21 I again saw the patient, when he expressed great gratitude for what he regarded as a sound and radical cure.

The patient soon after left the city, since which time I have been unable to obtain further information about the case.

Although what I have described as an impediment in the operation did not prevent complete success as far as the history of the case is known, I deem it worth while to state these particulars, as I apprehend the same difficulties may occur to others, tending to embarrass, if not to discourage them in the prosecution of this very rational and promising mode of treatment. To those who are inexperienced in this operation, then, I suggest the selection of the first of the two methods described as above for transfixion of the scrotal fascia, or the sac, in front of the cord, because thereby *the invagination is more easy and complete, the operation more satisfactory, and the cure is likely to be more sound.*

ARTICLE VIII.

COLICA PICTONUM—ALCOHOL ITS EXCITING CAUSE—THE ABUSE OF LEAD. By AMOS SAWYER, M. D., Hillsboro, Ill.

My attention was directed to this subject some years ago by the following circumstance: During the year 1851 an acquaintance, residing at Brookline, Mass., while mixing a glass of brandy, was surprised, upon adding water, to see the mixture assume a dark color. Attributing it to the liquor, he opened a new bottle, filled a clear glass, but with a like result. I would here state that the whole family had been quite unwell for some time—apparently nervous prostration. One member had a paralytic stroke; another, slight amaurosis; a third, hysteria; while all gave evidence that some mysterious agent was slowly but surely undermining their health. He, therefore, sent a sample to his family physician, (Dr. Ware) with the request to have it analyzed. It proved to be caused by *lead* contained in the water, it having been conducted through lead pipes.

As usual, the members of this family had free access to the wine-cellar, and with the second meal wine was always served. One young lady, however, seldom drank liquor of any kind, and, although *all* the others suffered more or less from colic, she was an exception to the rule, never having been troubled in that way.

This excited my curiosity, and I determined to investigate the subject. With this object in view, I have made it a practice to inquire of every painter I may meet, Have you ever known a *strictly* temperate man to suffer from lead colic? In *every* case the answer (after some deliberation, for the question seemed to take them by surprise,) was, "I have not." In but *one* instance did I receive a *prompt* reply. In this case the gentleman, who owned a large shop in Boston, had, when an apprentice some twenty years ago, observed that only those who indulged in intoxicating beverages suffered with colic; he had never drunk anything stronger than water, and so far had escaped. So fully convinced was he that it was owing to his total abstinence that he considered it his duty to warn his workmen to be temperate if they would escape. "There is no such thing as *lead*, but there is *rum* colic."

It was only last week I conversed with a very intelligent painter, recently from England. He could not recall a single instance where colic occurred in a temperate man. He says cases are far more numerous among the workmen in England than here, and suggests that it may be attributed to intoxicating beverages, particularly gin, which they think acts as a preventive.

It may be urged that *colica pictonum* is of rare occurrence. I admit cases seldom come under a physician's care, because they, in most cases, cease work when they feel the premonitory symptoms, and treat the disease themselves.

In order not to be misunderstood, I will state my views succinctly. Although a strictly temperate man is equally susceptible to lead poison, only he who indulges in intoxicating beverages is in danger of, or succumbs to lead colic.

That a large portion of the inhabitants of the United States are suffering from the poisonous effects of, and that the fearful increase of neuralgia, paralysis, and a host of other nervous disorders, are consequent on the abuse of lead, I consider unquestionable. This may seem to be a bold assertion; but when we remember that lead in some form is introduced into every family—as pipes for pumps; painted roofs, the water from which, nine times out of ten, is conducted through painted spouts to the cistern for family use; water pails painted inside, and in universal use; old tinware, the holes in which are usually soldered with this metal by some member of the family; not to mention the different preparations of lead used as the base of all so-called cosmetics, and so on to the end of the list—I think there are few who will deny that its effect upon the general health can be otherwise but injurious.

Nor is this all. The people, as a class, are entirely ignorant of the poisonous effects of this metal. In illustration, I will cite a few instances that have from time to time come under my observation.

CASE I.—Here I found the gentleman at work repairing his pump, the lead pipe having "worn away next the iron and sprung a leak." He stated that the pipe was originally $\frac{1}{4}$ of an inch thick, had been in the well for about two years, and now it had worn away for about 18 inches from the iron till it was as thin as paper. He could not account for it, as the man who sold him the pump told him that where lead and iron was in contact the acid would not affect it; and

yet he was in the act of splicing on a pipe of the same metal. I explained to him its poisonous nature, and that, although his pipe was, by being in contact with iron, protected from the action of acids, he must remember the water contained an alkali, (lime) and this would cause it to be saturated with lead, and his daily dose would be far from homeopathic. He procured an iron pipe. In this case the man who sold that pump was, in every sense of the word, a criminal ; for, by his very explanation, it is evident he was well acquainted with the chemical action ; but because the poison acts somewhat more slowly than arsenic, he escapes his just due—State prison. The family, comprising seven members, were all subject to neuralgia ; one case each paralysis and amaurosis.

CASE II.—In this instance I detected the “blue line” on the gums of the father of the family ; and, although aware it was not considered a characteristic sign, yet I felt warranted in announcing he was poisoned, and that lead was the agent. Further inquiry proved they used cistern water exclusively, and it was raised by a pump containing a lead pipe. He had not felt any ill effects from it, and the only evidence that my diagnosis was correct was the “blue line” and a slight weakness in the muscles of the legs. The wife suffered greatly with neuralgia, and the saturnine icterus was plainly visible. The three children seemed to be quite healthy.

CASE III.—Colic : caused by eating pigs’ feet that had been pickled in a new bucket. Upon examination, found the vinegar had dissolved the paint ; some sulphate of baryta had settled on the bottom.

CASE IV.—Colic : caused by eating poorly preserved cherries that had remained for some time in a painted vessel. The smell of paint was so disagreeably strong I cannot conceive how any human being could have relished them. In this case the “blue line” was very plainly defined.

One word in reference to Saturnine paralysis. It has been stated, upon good authority, that the extensor muscles of the hand and forearm are usually first attacked. This has not been my experience ; for, in the limited number that have come under my observation, I find it about equally divided between the muscles of the anterior femoral and the extensor muscles of the forearm. It is but just I should state that I have never seen but one case of complete para-

lysis, and that was of the hand. You will find, however, that old painters complain more frequently of "weakness" of the muscles of the leg than of the hand.

In conclusion, I would respectfully call the attention of the profession to this subject, hoping it will receive their careful consideration. I feel convinced that, upon investigation, it will be found to be a vein that will well repay more general investigation, and that will, in all probability, explain many cases of unexplained disease which so frequently occur in general practice, especially of that class of nervous and paralytic disorders in which, at times, there is no clue to their origin.—*St. Louis Medical Reporter.*

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Watson Abridged: A synopsis of the Lectures on the Principles and Practice of Physic, delivered in King's College, London. By THOMAS WATSON, M. D., &c. (Abridged from the last English edition, with valuable additions, &c.)
By J. J. MEYLOE, A. M., M. D. Published by the Author : Philadelphia. 1867.

The above little work of 272 pages has been received from the Author.

As a book of easy reference—having full index of subjects mentioned in it—we are satisfied of its usefulness to the practitioner, who, in the perusal of a few lines, can get the main facts detailed through as many pages of the unabridged work. We well remember the advantages derived from a similar abridgment of Eberle's Practice in the com-

menement of our professional career, called "Eberle's Notes." We commend Dr. Meylor's book to the medical reader.

Treatment of Diseases of the Throat and Lungs by Inhalations with a new Inhaling Apparatus. By EMIL SIEGLE, M. D. Translated from the second German edition. By S. NICKLES, M. D. Cincinnati: R. W. CARROLL & Co., Publishers. 1868.

We have for some time been convinced of the great importance of topical treatment for chronic diseases of the respiratory passages, and read with pleasure works on this subject. The above little book will be read with advantage by physicians.

While the complicated apparatus, sometimes used for inhaling the vapor of dilute solutions for such diseases, may be profitably substituted by very simple means for applying to them more concentrated preparations, we hail with satisfaction any improvements in this way.

Signs and Diseases of Pregnancy. By THOMAS HAWKES TANNER, M. D., F. L. S., &c., &c. From the second and enlarged London edition. Philadelphia: HENRY C. LEA. 1868.

A handsome volume of 482 pages, bearing the above title, has been sent us by the Publishers. The mechanical execution of the work is such as would be expected from this excellent Publishing House; and the subjects indicated on the title page are ably treated of, and in the most fascinating style. Its perusal is more a work of pleasure than of labor. Every medical library should have Tanner's Signs and Diseases of Pregnancy.

A Manual of the Dissection of the Human Body. By LUTHER HOLDEN, F. R. C. S., &c., London. With notes and additions by ERSKINE MASON, M. D., &c. New York: Published by ROBERT M. DEWITT, 13 Frankfort street, New York. 1868.

This work, as the title implies, is a full record of the parts revealed by dissection, and does not treat of any system of organs in their connection. The nerves, arteries, muscles, &c., of any particular region are given in the order in which the knife reveals them, in which it differs with ordinary works on anatomy, that consider, in connection, all the parts of each general system of the body—such as the nervous, circulatory, &c. This is a convenient book for studying the relations of parts in any particular region.

EDITORIAL AND MISCELLANEOUS.

COLLEGE DISPENSARY.

For two years, patients have been prescribed for in Atlanta Medical College, and medicine furnished and prepared for their use. This arrangement applies only to those having chronic or other diseases which admit of their coming from their homes to the College for this purpose, and who have not the means of paying the ordinary fees in private practice. It affords such persons that relief from suffering and disease they so much need, and which they could not

obtain unless at a large outlay of money by the Government or City authorities in the establishment and operations of an extensive elemosenary institution.

Under the general supervision of Dr. N. D'Alvigny, the Dispensary is made to subserve purposes of humanity, and relieve the hospital, of which he is Surgeon, from the care of hundreds which would otherwise be a tax upon it. At the same time the Faculty of the College, who make themselves responsible for the thorough investigation of, and prescription for, the cases applying, insure all the advantages to the class of students in the College, that are obtained from so large a number and extensive variety of cases.

We give below the number of cases, each, of the various diseases treated the past eight months:

Neuralgia	40	Anasarca.....	4
Odontalgia.....	18	Ovarian Tumor.....	1
Amaurosis	1	Eczema	4
Feruncle.....	1	Vertigo	1
Hernia.....	1	Pharyngitis.....	5
Syphilis.....	98	Stomatitis	2
Intermittent Fever.....	66	Urticaria.....	1
Diarrhoea.....	16	Prolapsus Uteri.....	3
Influenza.....	52	Tonsilitis.....	7
Chorea.....	2	Uterine Engorgement...	1
Indigestion	25	Balanitis.....	1
Pericarditis.....	2	Hydrothorax.....	1
Scabies.....	41	Necrosis.....	1
Ulcers.....	12	Hypochondria.....	1
Bronchitis.....	21	Staphyloma.....	1
Epilepsy.....	2	Convulsions.....	2
Goiter.....	5	Lumbago	1
Phlegmasia Dolens.....	1	Spinal Irritation.....	3
Amenorrhœa.....	20	Adenitis.....	2
Aneurism.....	1	Ambustio.....	1
Val. Disease of Heart..	2	Glaucoma	2
Ophthalmia.....	12	Cataract.....	1
Rheumatism.....	28	Pneumonia.....	8
Leucorrhœa.....	5	Paronychia.....	3
Endo-metritis	10	Carbuncle.....	1
Mammary Abscess.....	3	Spleenitis.....	1

Aphtha	1	Croup	1
Gastritis	4	Hæmoptysis	1
Pleuritis	4	Abscess	19
Dysentery	12	Orchitis	4
Hepatitis	5	Ascitis	4
Hæmaturia	1	Laryngitis	7
Caries	2	Cystitis	3
Phthisis	4	Asthma	2
Hypertrophy of Heart ..	1	Tumors	8
Menorrhagia	6	Cornitis	1
Dysmenorrhœa	11	Icterus	3
Dentition	4	Nephritis	1
Remittent Fever	5	Tinea Capitis	1
Worms	15	Iritis	6
Gonorrhœa	20	Metritis	18
Constipation	25	Paralysis	2
Scrofula	20	Wounds	6
Cephalalgia	13	Ptyalism	2
Pregnancy	6	Menengitis	1
Debility	14	Ovaritis	2
Edema	1		

From the above it will be seen that during the eight months, ending the first of May, 1868, eight hundred and ten persons were treated in the Dispensary, and that ninety-three diseases were presented during the time. It appears that syphilis, intermittent fever, influenza, scabies, neuralgia, and rheumatism, in the order we now mention them, were the prevailing disorders. The predominance of scrofula over phthisis is somewhat remarkable; but when the fact is taken into consideration that a large majority of the subjects were negroes, and that the colored race are, in this latitude, more subject to the development of the former than the latter, from the depressing influences of the want of substantial comforts, the explanation is easy. The number affected with scabies, or itch, is not to be wondered at, for the reason that the want of cleanliness and the crowding together of large families of children tend to engender and perpetuate its existence.

The number affected with uterine disease of various kinds is fifty-eight. Of these, five with lucorrhœa and six pregnancy, the special difficulty requiring treatment is not specified, but a sufficient number have their disease definitely indicated to prove conclusively that uterine affections are not confined to ease and luxury.

PROF. J. BORING.

We mentioned, in the February number of the JOURNAL, the election of Prof. JESSE BORING to the Chair of "Obstetrics and Diseases of Women and Children" in Atlanta Medical College, and his expected return from Galveston, Texas, to make Atlanta his permanent home. He arrived the first week of the Session; and we are pleased to find him full of energy and enthusiasm in the discharge of his duties in the Chair he so ably filled during the first three years's exercises of the College. Below we give the sentiments of respect and confidence, expressed by his late colleagues in Galveston, on accepting his resignation:

GALVESTON MEDICAL COLLEGE,
GALVESTON, TEXAS, March 14, 1868.

PROF. J. BORING—Sir: We have the honor to hand you herewith a copy of the resolutions which were introduced, and unanimously adopted by the Faculty, upon receiving your resignation as a Professor in this College.

Very respectfully, your obedient servants,
GREENSVILLE DOWELL, M.D., Prof. Surgery;
T. J. HEARD, M.D., Prof. Theory & Practice, } Com'tee.
F. E. DANIEL, M.D., Prof. Anatomy,

COPY OF RESOLUTIONS

adopted by the Faculty of the Galveston Medical College, at a meeting held March 13th, 1868 :

Mr. President, and Gentlemen of the Faculty:

Your Committee, appointed "to draft resolutions expressive of our sentiments in severing the relations which have heretofore existed between Professor Boring and this College," beg leave respectfully to submit the following:

"WHEREAS, Professor Jesse Boring, the Founder and President of the Galveston Medical College, has tendered his resignation as Professor of Obstetrics; and Whereas, said resignation has been accepted, by this Faculty, therefore,

Resolved, That it is with feelings of no ordinary regret that we are compelled, out of consideration for the wishes of Professor Boring, and of the motives which prompted him to offer his resignation, to consent to his retirement from the Faculty; and that we do so in the hope that the change which he proposes to make may promote the health and happiness of himself and family.

Resolved, That in parting with Professor Boring, the Galveston Medical College loses one of its ablest teachers; and sustains a loss which is indeed irreparable; that we, as a Faculty, lose an esteemed friend and a colleague whose absence will be seriously felt in our deliberations and in the social circle, as well as in the lecture room; and this community will deplore the loss of one of its best citizens, and most exemplary members of society.

Resolved, That these resolutions be spread upon the records of the College, and that a copy be handed Professor Boring, with the expression of the sincere hope that in returning to his old home in Georgia, his hopes and expectations may be most fully realized, and that he may find friends there who will appreciate and prize as we do, his many excellencies as a Christian gentleman, a citizen, a friend, and a teacher and practitioner of medicine.

Respectfully submitted,

GEEENVILLE DOWELL, M.D., Prof. Surgery,
T. J. HEARD, M.D., Prof. Theory & Practice, } Com'tee.
F. E. DANIEL, M.D., Prof. Anatomy,

ATLANTA MEDICAL COLLEGE.

The exercises of this Institution commenced at the appointed time, and are progressing regularly. A modification of the curriculum of study, so as to make "Clinical Medicine" a regular Chair in the College, adds greatly to the interest of the Course, with those soon to assume the practical duties of the profession. An hour and a half every day devoted in this way, with the amount of material at the command of the Professor of this Department, could not be more profitably employed. More than this, and the Surgical Clinic once or twice a week, however, cannot well be spared from the investigation of the fundamental branches of medicine, by those even who are in their second or third course of Lectures, but have not yet graduated.

The class in attendance is much larger than any since the war; and the young men composing it compare favorably with those of any medical class we have ever seen. With the energy and determination exhibited on the part of the Faculty, and the promptness and close attention given by all the students, the present session will doubtless be made the most successful one ever held in the institution.

We sincerely deplore the sad affliction of Prof. Means' family, by which he has been deprived the pleasure of meeting the class at his regular hour on a few occasions. Aside from this melancholy circumstance, no want of regularity and harmony is found to interfere with the satisfactory and successful progress of the course of instruction.

L. P. YANDELL, JR., M. D.

With this number of the Journal we publish the last of a series of letters from this able and talented gentleman. We thank him in our own behalf, and also that of our subscribers. We wish him the fame to which he aspires, and to which his learning and talents entitle him.

He has returned to Louisville and resumed the practice of medicine.

RICHMOND MEDICAL JOURNAL.

We received, some weeks ago, a communication from Dr. E. S. Gaillard in reference to the removal of the "Richmond Medical Journal" from Richmond to Louisville, Ky., where it will be published under the name of the "Richmond and Louisville Medical Journal."

As our Journal goes to press, we discover that the communication has been mislaid.

We bear willing testimony to the ability of the Richmond Medical Journal under the editorial management of Dr. Gaillard, and shall always welcome it to our office.

Dr. G., we are informed, accepts a Chair in the Kentucky School of Medicine.

We are requested by the Editor of this popular and useful Medical Journal to state that our subscribers can receive it regularly at \$3 a year. This is certainly a reduced price for so large and valuable a monthly periodical, and will doubtless add greatly to its circulation. The regularly published rates require \$5 per annum, in advance.

IMPURITIES IN GLYCERIN.

To the Editor of the *Chemical News*:

SIR—The writer of the article on glycerin in *Kunst und Geweberblatt* is correct in attributing the acrid, irritating properties of some glycerin to the mode of preparation; but I have distilled glycerin which was quite as unsuitable for medicinal or surgical purposes as any spoken of. The volatile fatty acids and ethers which exist in crude glycerin are sometimes condensed with the glycerin, and these have very irritating properties.

In the glycerin which is made without distillation, the volatile acids and ethers exist, but not in the same state as after distillation, the high heat required for this process decomposing them into some modification of their original state.

The great cause of irritation in glycerin which has not been properly prepared is the presence of oxalic acid and of formic acid; these are produced by the action of sulphuric acid upon the glycerin, forming the first mentioned acid, and this, in its turn, acts upon the glycerin, giving rise to formic acid, the irritating properties of which are well known.

The nitraie of silver test I have always considered the most reliable. Glycerin, which shows no reaction with this salt, may be considered suitable for all uses, as it indicates not only the presence of chlorine or chlorides, but is, as well, reduced by acids which may exist in the glycerin.

I am, &c.,

HENRY BOWER.

Philadelphia, January 16, 1868.

[*Chemical News*.]

SYRUP OF IODIDE OF IRON.

The preservation of this very useful preparation of iron and iodine has engaged the attention of pharmaceutists for several years past.

The American Journal of Pharmacy copies an article from the London Pharmaceutical Journal, written by Thos. B. Groves, F. C. S., giving his experiments with this preparation. To thirty-one fluid ounces of the syrup he adds half fluid ounce dilute phosphoric acid, and says "phosphoric acid is the only acid that can be relied on for the preservation of the syrup of iodide of iron."

CARBOLIC ACID IN BURNS.

Professor William Pirrie, of the University of Aberdeen, recommends carbolic acid and olive oil in the proportion of one to six as an application to burns. He relates in the *Lancet* the case of a delicate girl eleven years of age whose face, neck, side, back and arm were severely scalded by boiling water. Two folds of surgeon's lint were soaked in the carbolic acid and oil and applied over the whole surface, tin foil being placed above the lint to exclude the air. In ten minutes the patient was free from pain. On the second day the skin was greatly improved, and the bullæ which had formed seemed withering away. The skin was perfectly healed on the twelfth day, the cuticle having been thrown off. Not a drop of pus formed during the treatment.—*Pacific Medical Journal.*

MEDICATED BOUGIES FOR GONORRHOEA.

Dr. Bartholow (*Cincinnati Repertory*) employs with great benefit in gonorrhœa, after the subsidence of the first stage, and in gleet, bougies of cocoa butter variously medicated. Tannic acid, acetate of lead, morphia, and other remedies may be thus applied directly to the disordered surface. In summer it is necessary to add a little wax to the butter. The bougie should be about four inches long, and large enough to fill the urethra without distending it. If it tends to slip out, a strip of adhesive plaster can be applied. The best time for its use is at night.—*Pacific Medical Journal.*

PHYSIOLOGICAL AND THERAPEUTICAL ACTION OF CAFFEIN.

The number of the *Archives de Physiologie et Pathologique* for January and February, 1868, contains an interesting paper on this subject by Dr. Leven. The following are the conclusions he draws from his experiments :

Caffein appears to directly stimulate the heart. When first absorbed, the circulation and respiration are accelera-

ted, the pulse is more frequent and firmer, and the secretions more active.

The central nervous system, the brain and spinal cord, and the nerves are stimulated.

The muscular system of the life of relation and that of organic life contract violently.

The muscles of the former system are affected with trembling or with general contraction. The fibres of the stomach, of the intestines, and of the bladder also contract.

At a later period, after absorption of caffein, the action of the heart is lessened; the frequency and firmness of the pulse diminished; the muscular system becomes exhausted, but is not paralyzed. The nervous system also suffers exhaustion.

Caffein does not entirely extinguish reflex action, nor the functions of nerves and muscles.

It acts as a poison on different animals in different doses; it may be given to man in the dose of many grammes without injury.

It is readily eliminated from the system, and remains in it only a few hours.

He further states that caffein, like alcohol, diminishes the secretion of urea, but increases the quantity of urine excreted. It diminishes the waste of the organs, and economizes the tissues.

With two litres of coffee daily the Belgian miners undergo, without substantial food, excessive muscular exertion. The caravans which traverse the desert are supported by coffee during long journeys and lengthened privation of food. It is known that some old persons are almost exclusively nourished by coffee.—

INFLUENCE EXERTED BY ANÆSTHETICS ON THE BRAIN AND NERVOUS SYSTEM.

This was the subject of a recent lecture by Dr. B. W. Richardson. The obvious fact that the motion of the heart and the movements of respiration continue in action while the rest of the body is under the narcotic effect during anaesthesia proves that the whole nervous system is not in-

volved, and that the involuntary and semi-voluntary muscular mechanism is also not involved except when extreme and fatal symptoms are developed. What parts, then, are influenced by an anaesthetic? The idea was almost intuitive that the brain is the organ affected, and that the centers of consciousness are those chiefly held in abeyance. But to prove this as true, experiment was necessary. In proof, the lecturer took a large pigeon, narcotized it deeply with chloroform, and in this state passed through its body, from the head to the foot, a rapid intermittent induction current. The bird instantly rose from the table, extended its wings, opened its eyes, and seemed as if restored; the current was then stopped, and the bird was shown to be as deeply asleep and as powerless as before. Another bird was put to sleep by freezing the brain; and when utterly insensible, was subjected to the electrical shock in the same way, when it flew from the table into the room, where, breaking its connection with the battery, it dropped on the floor comatose, motionless, and as anaesthetized as before, in which condition it remained for many minutes. The lecturer, in these experiments, demonstrated that the anaesthetic action was localized in the cerebrum. His battery was like an outer brain, which supplied power without intelligence, and which, by the effects of its current, showed that all the muscular elements were ready for work, and only awaited the order from the brain. The lecturer next discussed the question, What, during the process of anaesthesia, leads to this change in the brain? Is there a chemical action on albumen? Is there pressure on brain matter? Is there deficient oxidation of the blood? Is there contraction of blood vessels, and diminished supply of blood from that cause? All these hypotheses were experimentally tested and negatived. It was admitted that, during extreme anaesthesia, there is reduced oxidation and a singular reduction of temperature. These changes are inevitable, because the anaesthetic vapours replace oxygen during their diffusion into blood; but the diminished oxidation is not the cause of the insensibility. In proof of this, Dr. Richardson showed an animal breathing an air in which the oxygen was reduced by addition of vapour of bichloride of methylene only to about 20 parts to the 100—viz., 4 cubic inches in 500. The result was that the animal, in the extremely reduced atmosphere, was quite unaffected, whilst the animal in the slightly reduced atmos-

phere was in the deepest narcotism. Then a correcting experimental test was adopted, and the bichloride was administered in an atmosphere containing an excess of oxygen, the oxygen being present in double its ordinary or natural proportion; the excess of oxygen exerted no perceptible obstacle to the anaesthesia. To determine whether there was contraction of blood vessels under anaesthetics, the lecturer had recourse to transparent small trout; through their bodies, with the microscope and the one-inch lens, the blood vessels could be seen, and the corpuscles flowing through them. These animals can be narcotized readily by making them breathe water saturated with chloride of methylene or ether. In the narcotized condition, the vessels do not contract, but under the influence of ether, in the latter stages before death occurs, dilatation and regurgitation are observed. The latter is noticed, also, when chloride of methane is used. With both reagents breathing, and vessel circulation cease before the heart's action. The lecturer concluded that anaesthetic vapours act directly upon nerve matter either by preventing the development of force or by stopping conduction. The latter hypothesis is supported by the fact, proved by experiment, that these vapours obstruct the conduction of heat and electricity.—*Medical Times and Gazette.*

ACTION OF PUTRID MATERIAL ON THE ANIMAL ORGANISM.

The following conclusions have been derived by Dr. Moriz Hemmer, of Munich, from his researches on the nature and action of putrid fluids:

1. Putrid infection causes severe acute inflammation in the intestinal mucous membrane and the glands of the chylopoietic system.
2. It excites very violent central irritation.
3. By it the blood is changed into a dark colored, thin, and scarcely coagulable fluid.
4. It causes the rapid

approach of putrefaction. 5. The putrid poison is an albuminoid body undergoing change, not fluid or gaseous, but solid. 6. The poison acts in imperceptibly small doses; and, with regard to its intensity, can be compared only with the most active toxic agents known to us—some vegetable alkaloids, curare, the snake poison, etc. 7. It is insoluble in absolute alcohol, soluble in water. 8. It resists a heat of 100 degrees centigrade. 9. It acts as a ferment, and induces zymotic changes in the blood. 10. The action of the putrid poison is exerted on the albuminoid materials of the plasma of the blood. 11. An analogy may generally be recognized between putrid infection and the infectious diseases. 12. The morbid material of the infectious diseases are, therefore, putrid poisons, and possess the properties of the same. 13. The varying action of the morbid materials in the infectious diseases depends upon a special modification of the putrid poison.—*British Medical Journal, from Blätter f. Staats-Arzneikunde.*

ZYMOYSIS—A NEW ANTISEPTIC SALT.

Dr. Sansom, in a paper read before the Medical Society of London, gave an outline of the theory of zymosis. In tracing the origin of infecting particles, we may, he said, divide them into two classes: First, those arising from the animal world, such as variola, vaccine, pyæmia; and secondly, those arising from the vegetable world, as favus, thrush, and, if we are to believe a large mass of scientific evidence, diphtheria, ague, &c. But whether animal or vegetable, it cannot be determined with accuracy whether the materies morbi is, at the period of infection, one or the other. It is best, under such circumstances, to call it "germinal matter." Dr. Sansom then related a series of cases which had occurred in his practice, all of which were united by close relations of time, place, and circumstances, and in one of which the "odium albicans" was discovered as a

prime factor in the disease. The author then discussed the operation of disinfectants. He divided them into three classes : First, those which alter the chemical constitution of the matières morbi, such as chlorine and iodine; secondly, those which act partly chemically and partly vitally, such as the sulphites ; and thirdly, those which act only on organized material, arresting vitality, such as carbolic acid. The treatment of zymotic disease by the internal administration of the sulphites was then considered, and forty-one cases were brought forward in which they had been employed, and in which one death only occurred. The facts seemed to be that the sulphites are the most easily absorbed of our internal antiseptics, but that carbolic acid is the most powerful. The author concluded by saying that the great desideratum was a salt which should combine the two. This desideratum Dr. Sansom had succeeded in fulfilling, and specimens of compound salts, the sulpho-carbolates, were exhibited to the Society.—*Medical Times and Gazette*.

SORE NIPPLES.

Dr. Blaguiens says, in the *Journal des Connaissances Médicales*, that three or four applications of the following compound cures this complaint : Cocoa butter, 150 grains ; ext. of rhatany, 10 grains.—*Nashville Journal*.

ULCERATION OF THE TONSILS.

Dr. G. W. Champ recommends the following wash as most effectual in ulceration of the tonsils, or aphous affections of the mouth : Take pulv. sulphate of zinc and chlorate of potash, of each two drachms ; strong sage tea, half a pint. Mix. Gargle the throat frequently.—*Ibid.*

CHLOROFORM IN INTERMITTENT FEVER.

Dr. D. Scott, of Bellefontaine, Iowa, has administered chloroform, in intermittent fever, as first recommended by Dr. E. McClellan, in the No. of this Journal for July, 1866,

(pp. 271-4) and April, 1867, (pp. 370-6) and he states (*Chicago Medical Journal*, Feb. 1866) that he has carefully noted its effect in upwards of fifty cases, with the following results: "In twenty cases, after the administration of one fluidrachm each, the chill was immediately arrested, with the exception of one case, in which the above dose was repeated in one hour; in eleven of the above cases, the febrile stage was probably abridged; of the remaining cases, the fever ran about as usual, all, with few exceptions, terminating in profuse perspiration; in eight of the cases, the paroxysm returned on the succeeding day, and nine on the second day, and three escaped, but were subsequently attacked in from seven to twenty days: of the remaining cases, no reliance was placed in the curative properties of the chloroform (which I only administered for the purpose of abridging the chill,) but was followed by large doses of sulph. quinine as soon as the sweating stage was established." In conclusion Dr. S. says that chloroform is a valuable and safe hypnotic in the dose of one fluidrachm, in the cold stage of intermittent fever, and never fails to arrest the chill, the patient falling into a refreshing slumber as described by Dr. Dr. McClellan. Dr. S. administered it, like Dr. McClellan, undiluted.—*American Journal Medical Science*.

ENLARGEMENT OF ALL THE LYMPHATIC GLANDS.—(HODGKIN'S DISEASE.)

At page 383 of the present number will be found an interesting case of this, reported by Dr. John J. Black. We find another recorded by Dr. Wm. Carson, in our esteemed cotemporary, the *Western Journal of Medicine*, (Feb. 1868) and which we quote as an interesting contribution to our knowledge of this affection.

The subject of it was a woman twenty-eight years of age; unmarried, very pale, thin, and feeble, and having the physiognomy of protracted illness. Limbs wasted, breasts hard

and disproportionately full, abdomen prominent and tolerably tense. Superficial, uneven and nodulated enlargements or tumors, hard and painless, were to be felt everywhere over the surface of the abdomen, and were evidently enlarged lymphatics. They were more numerous above the pubis, between the breasts, and towards the axillæ. The mammary glands were also affected by the same deposit.—Each nodule was readily defined, the skin was movable over it, and not discolored. During her early stay in the hospital, and before the effusion into the abdomen became too large, uneven and hard masses were to be felt within the abdominal cavity. They were larger than those on the surface, and grew rapidly. The glands of the neck were also enlarged, but not to the same extent as in the other regions.

The history that she gave of herself was, that she had enjoyed ordinary health until about two months since, when she noticed some changes in her breasts, and the beginning of the small, tumour-like swellings over the lower chest and abdomen. Pains in the abdomen were occasionally felt, and the abdomen began to enlarge, both on account of the irregular and hard growths and on account of some effusion.—Her strength began to fail rapidly, and she had been confined to her bed two weeks before her admission into the hospital.

"The treatment was determined by the two most obvious facts in the case: first, the general cachectic condition and the progressing disease in the abdomen, or rather the secondary effects of it, in producing dropsy. The prognosis was certainly fatal, and probably within a short period.—Tonics of various kinds and diuretics were used without effect. Evidences of the implication of the thoracic organs began to appear, in cough with mucous expectoration, and some dulness in the percussion sound of the chest, in limited portions both anteriorly and posteriorly. There was no acute pain, and no great disturbance of the respiratory act. The heart acted feebly but regularly, and without abnormal sound.

"She rapidly sank within three weeks from the time of her entrance into the hospital. The duration of her case, counting from her date of the beginning of her troubles, was about ten or twelve weeks.

"The *post mortem* examination showed, beginning with the thorax—externally as we have before said—nodulated

masses on the surface between the breasts, in the mammae and in the axillæ, each distinct, and of sizes from an almond to a walnut, with the skin movable over them. The lymphatics of the neck were enlarged. In the cavity of the thorax there were nodules scattered over the costal and pulmonary pleura, of varying size, some quite large. In the parenchyma of the lung were the same, with more tendency to infiltration. The pericardium also had a few. There was slight effusion into the pleural cavities. The heart was healthy. In the abdominal cavity not a single organ escaped. The liver was particularly affected, and contained numerous irregular masses of the same hard, cartilaginous substance, both on its surfaces and in its substance. The spleen was less affected than the liver, and the stomach still less. In the lumbar regions the masses were enormous.—The uterus could scarcely be distinguished, and the pelvis was filled with the masses. The mesenteric glands were much enlarged, and the mesentery was almost a solid mass.

"The morbid growths cut with a hard, gristly feel, with rather a dry surface, and had the physical and microscopical appearance of scirrhus. We regret to say we did not make a thorough examination of the enlarged lymphatics."—*Amer. Journal.*

PUNISHMENT OF ABORTIONISTS.

We are glad to see that some of the vampyres of society are likely to get a share of their just dues. The trial of Dr. G. W. Briggs took place at Providence, R. I., a fortnight since. This, we believe, is the first case that has come to trial under the new statute, which imposes a penalty for the committing of an abortion, of imprisonment in the State Prison of from one to seven years. The testimony of the woman showed that the operation was performed by Dr. Briggs at her own request, her lover, to whom she was then engaged, and was afterward married, accompanying her to the practitioner's office, and paying the bill of \$25. Two subsequent operations were necessary before the purpose was accomplished. Upon the body of the child, prematurely born, and born alive, were marks made by the instrument used. The man and woman, soon after this time,

went to a place in the northern part of Vermont, and endeavored to live in concealment, for the purpose of avoiding being used as witnesses in this case. As inducements to this course, the man testified that \$50 had been handed him in the street by an unknown man, and also a note for \$300.—The note was signed "G. W. Briggs," but the genuineness of the signature was not proved before the court. The other evidence presented was that of the physician who was summoned at the inquest, that of the one who attended the woman in her sickness, and that of officer Billings, who made the arrest. The jury, after a short absence from the court-room, returned a verdict of "Guilty!"—*Reporter.*

A NEW INVALID BED.

There is now on view at the establishment of Mr. Ward, the invalid chair-maker, Leicester Square, a new invalid bed, admitting of a much greater variety of movements than any of those at present in use. The upper framework has adjustments similar to those of an ordinary fracture-bed, permitting the body to be raised to various inclinations, and the knees to be bent to various angles. But the peculiarity is, that this frame-work is supported, under its centre, on a large ball and socket-joint, which allows the whole framework, with its variously adjustable ports, to be moved about bodily in all directions, so as to be inclined longitudinally, laterally, or both, and to be moved round so as to face all points of the compass. By means of a simple locking apparatus, the framework is firmly fixed in any attitude that may be desired; a few turns of the handle sufficing again to release it, and any other attitude to be assumed. Among the advantages obtained are these:

The patient may be taken out of bed and put into bed again without the effort ordinarily required. The ball being unlocked, and the bed being gently tipped forward, so that its lower end reaches the floor, the patient comes upon

his feet ; and after the sheets have been changed, or some needful act performed, he is placed with his back against the inclined surface of the bed, which, being then made to revolve backward, he lies as at first.

By a lateral instead of a longitudinal inclination of the bed, the patient may be turned over from the back on to the side, or contrariwise, saving the labor and pain often entailed by this change.

The longitudinal inclination of the bed being changable at pleasure, the patient may lie or may sleep at any angle that he may prefer, or that is prescribed, either with the head higher than the feet, or, as it is sometimes desirable, with the feet somewhat higher than the head ; the inclination being, of course, adjustable to nicety and changable at will.

The movable framework which supports the trunk being raised, so that the trunk and legs form an angle (which may be varied to any extent up to a right angle), the whole bed may then be moved longitudinally round its centre of support, so that the body in this bent position may have the head and feet placed at all varieties of relative elevation.—For example, while the trunk is horizontal, the legs may be greatly inclined upward, an attitude that is desirable where injury of the foot or knee renders it proper to diminish the pressure of blood.

The framework that bends the knees being raised, as well as that which inclines the trunk, the same longitudinal rotation of the framework gives a great variety of partly reclining, partly sitting postures. The patient may be placed, without any effort to him, in all attitudes between that of lying horizontally and that of sitting upright in an easy chair.

These movements may, of course, be all of them joined with any such degree of lateral inclination of the bed as is desired ; so that, supposing the framework has been adjusted somewhat into the form of an easy chair, and tilted forward or backward so as to bring a wounded arm or foot to the right height, the bed may be at the same time tilted sideways, so as to bring this wounded arm or foot on the uppermost side, into the most convenient position for dressing the wound.

At the same time the movement of horizontal rotation being brought into play, the whole bed may be moved

round until the injured part is turned toward the light; this same horizontal rotation being, at other times, available for giving the patient change of view, enabling him to look out of the window when raised in the sitting posture, or to have his face turned away from the light if it is distressing.

To the side of the framework is fixed a movable arm, carrying a small table to support a plate or basin, and this, by a slight change of position, also becomes a reading easel.

One of the advantages of the bed, not originally foreseen, but which has come out in practice, is that of being able to make certain changes in a patient's position quite suddenly. When the ball and socket-joint is but partially locked, so that a moderate force applied to the head or foot of the bed will change its position, the patient, previously lying back, may be instantly raised into the sitting posture if a coughing fit come on.

One further use that may be named is, that when the ball and socket-joint is completely unlocked, so as to permit perfect freedom of movement, two attendants, seizing the handles on the opposite sides of the bed, may give the patient a little exercise by rocking the bed from side to side in the manner of a cradle.

Beyond the special advantages above described, there are some general advantages. The ability to change the posture of the patient in such a variety of ways and degrees, without any effort to him, must tend to diminish that pain, weariness and irritability caused by long continuance of the same attitude, or by small choice of attitudes, and must so conduce to convalescence. A further result to be anticipated is, that bed-sores may be avoided, the points of chief pressure being changeable at will, and as often as is desired.

This bed, devised by Mr. Herbert Spencer, the distinguished biologist and philosophical writer, for a member of his own family, has been in use between four and five months, and has so far answered expectations that he has had a second made, with sundry improvements, hoping that it may be of service to others. Mr. Spencer has refrained from patenting it, not wishing to place any obstacle in the way of its general use.—*British Medical Journal.*

CHRONOLOGY OF ANAESTHESIA.

The following is a chronological history of painless surgical operations during the anaesthetic state, induced by the inhalation of narcotic and stimulating vapors:

"The first surgical operation during an anaesthetic condition, induced by the inhalation of the fumes of rum, was the reduction of a dislocation of the hip-joint of a negro, 'Bob.' Louisiana. By Dr. Collyer. December, 1839.

"Extraction of tooth from Miss Mary Allen during an insensible condition, induced by the inhalation of ether combined with the fumes from poppy seeds. Philadelphia. By Dr. Collyer. November, 1842.

"Publication of 'Psycography,' (copy-righted work,) wherein, at pages 26, 27 and 28, particular mention is made that the inhalation of narcotic and stimulating vapors will produce the anaesthetic state. Philadelphia. By Dr. Collyer. May, 1843.

"Insensibility produced by the inhalation of protoxide of nitrogen. Hartford, Connecticut. Horace Wells. 1845.

"Publication in Boston *Medical Journal* that ether, combined with opium, would produce the anaesthetic state. Boston. By Dr. Smilie. June, 1846.

"Administration of ether by Drs. Morton and Jackson. Boston, U. S. September, 1846.

"Inhalation of chloroform. Edinburgh. By Dr. Simpson, 1854. (1847?—Z.)

"Amylene. London. By Dr. Snow. 1857.

"Bichloride of methylene. London. By Dr. Richardson. 1867."

SUBSCRIPTION RECEIPTS FOR THE JOURNAL.

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JOURNAL.



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Pax et scientia, sed veritas sine timore.

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ATLANTA

Medical and Surgical Journal.

NEW SERIES.

VOL. IXA. JULY AND AUGUST, 1868. No. 3.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

Ceanothus Americanus. (*Red Root, New Jersey Tea.*) By
D. L. PHARES, M. D., Newtonia, Miss.

The natural order Rhamnaceæ contains several genera of valuable medicinal plants indigenous to the Southern States: as *Ceanothus*, *Rhamnus*, *Frangula*, *Berchemia*, &c.

In this paper, I will limit myself to a brief notice of the first, which is found in most of the Southern States, perhaps in all; growing in dry woods, preferring, so far as I have observed, gentle slopes, and a soil with a considerable percentage of sand. Calyx 5—cleft with the tubes aduate to the ovary and persistent, the lobes connivent deciduous. Petals 5, longer than the calyx, hooded, long-clawed, stamens exserted. Style 3—parted; the small flowers and pedicels white; drupe dry, composed of three 2-valved, 1-seeded nutlets; plant suffrutescent, 1 to 2 feet high, consisting of a few to many small stems, rising from one large root, of a dark red color, and bark containing many small white veins, and having the odor of peach leaves; branches light-green, pubescent; leaves deciduous, petioled, 3-ribbed,

more or less pubescent, often nearly smooth, three-quarters to three inches long, ovate or ovate,—lanceolate, acute or obtuse, sharply serrate. Other varieties or species with leaves only two to five lines long.

The dried leaves, slightly bitter and astringent, have the odor of the black tea of commerce, as a substitute for which they acquired considerable notoriety during the war of American Independence. The leaves, flowers, and root have been used medicinally, and reputed astringent, diuretic, tonic, expectorant, sedative, antispasmodic, antisyphilitic, &c. The Indians used it in fevers, dysentery, epilepsy, asthma, chronic bronchitis, pertussis, gonorrhœa, syphilis, &c. An Indian remedy, for dysentery, of considerable reputation, the formula of which has never been made public, is prepared by boiling the root of the plant, cut in small pieces, in the crushed dups of the Callicarpa; to which add sugar and molasses, and boil to rich syrup. Dose f. 3 ss.—i. p. r. n. I have tried this remedy in a few cases; not enough to test it fairly. Not finding its action so prompt and satisfactory as other remedies, I did not experiment much with it. This preparation, and others, have been long used, and are still used, in gonorrhœa and syphilis, with an alleged success, which, if true, surpasses that of any other remedy within my knowledge, curing inveterate cases of the latter in a fortnight, and the former in three days. Having no experience with it in the premises, I am not prepared to admit the truth of these extraordinary claims.

In the Boston Medical and Surgical Journal, 1835, Dr. Hubbard commends *Ceanothus*, in decoction, for dysentery and ulcerated sore throat of scarlatina; and, in aphthæ of children and sore mouth after fevers, he succeeded with it when all other remedies failed. Other authorities, American and European, might be cited; but I presume enough has been said on the use of this plant in the diseases mentioned to excite attention; for if it possess only in part the properties ascribed to it, it is certainly worthy of investigation.

My object, however, in writing, is from my own knowledge and experience to add to the already long list of valuable properties ascribed to this plant, one more, which, so far as I know, has escaped the notice of others. During the late civil war I commenced using it for splenitis; and so well satisfied have I been with the results, that for six years I do not remember using anything else for enlarged spleen.

In this affection, I have never found any remedy superior to *Ceanothus*. I have used it in the worst cases I ever saw, from tender infancy to advanced age. (Two of the largest spleens, relatively, I ever saw, were in the same family, one a child a few months old, and the next year one a few weeks old, probably born with enlarged spleen.) I have yet to see or hear of its failure in a single case, however inveterate.

During the war, I had neither time nor means to procure elegant preparations, so I ordered a bottle loosely filled with the chipped root, carefully putting in all the bark, and then filled with spirit. frumenta. It was ready for use in a week, and the dose for an adult, f. 3 ss.—i ter. die.

I directed the same tincture rubbed on the surface over the spleen, bis. die., the patient having the side turned towards and near a fire. A second bottle is seldom required. In chronic cases, when the organ is no longer tender, under the use of this tincture, even without the friction, it soon becomes painful and tender, and then sinks very rapidly to its normal size, and so remains, the patient being no longer conscious of its presence. I have not seen a relapse occur in any case; though no doubt such would be likely to occur under circumstances favoring it.

We have other indigenous remedies for this affection, which I have tried and found very valuable, of which, at another time, I may have something to say.

ARTICLE II.

Diagnosis of Idiopathic Fevers. By F. M. BEANTLY, M.D., of Rocky Mount, Ga.

The great desideratum in the successful treatment of disease, is an early and correct diagnosis. Although most of the maladies that are incident to the human family may be rationally and scientifically treated on general principles, yet "the more perfect and sure way" is to understand the pathological and anatomical lesions, or, in other words, to be able to locate and identify the true source of each particular affection. Many diseases will not permit delay in their diagnosis, without great risk to the patient. Hence the difference in the success of Doctors; some are ever learning and never come to a knowledge of the truth, while others appear to arrive at correct conclusions almost without an effort.

With regard to the etiology of fevers, I am inclined to the opinion that there are but two principal causes, and that these two causes produce two distinct kinds of fever. The combination of these causes gives rise to mixed or mongrel fevers, and it is this class that has wrought such havoc in our nomenclature. One might suppose, from reading the various authors extant, that there was really a vast number of distinct idiopathic fevers, but to sum up the whole matter according to etiological and pathological principles, the conclusion is forced upon the mind that a vast amount written upon this subject is mere hypothesis, and likely to be erroneous.

The causes above alluded to are, vegetable malaria and animal miasm, the former producing intermittent, remittent, bilious, congestive, and all that kind of fevers that have marked exacerbations, and the latter producing that class of continued fevers commonly known as typhus, typhoid, synochus, synocha, enteric, &c. From this, it would seem that

there are really but two kinds of distinct idiopathic fevers to be met with in this country. This we believe to be the truth, and for the sake of simplicity and clearness, we prefer to apply the terms remittent and continued, as expressing our idea of these two classes.

From our classification, it would seem an easy task to refer any case to its proper place, but what would appear easy in theory is often difficult in practice; for it often happens, that one of these orders so nearly assimilates the other, owing to fortuitous circumstances, that we scarcely know whether we should call it remittent or continued. Doubtless many lives have been sacrificed by want of this discrimination, because the treatment that would be proper in the one case would often be extremely pernicious, and even fatal, in the other. We should never lose sight of the idea that the two classes under consideration possess a separate identity, lest we find Scylla upon the one hand and Charybdis upon the other.

We will now proceed to mark some of the differences between remittent and continued fevers; and here, one of the first essentials is a good time-keeper, because it is mainly to the action of the heart and arteries that we must look, as the most certain index for a proper discrimination. In remittent fevers, the pulse will often take the widest range, both as to frequency and volume, sometimes varying from twenty-five to fifty beats per minute in twenty-four hours, and sometimes being full and bounding, and then soft and yielding. Alimentary evacuations, either with or without medicines, have a tendency to lessen, for a time, the frequency of the heart's action. In like manner will all the other signs exhibit marked exacerbations, being better one day and much worse the next. This class, for the most part, yields readily to medical treatment.

Continued fever, unlike the foregoing, is usually insidious in its approach, producing, at first, oppression and dulness in the base of the brain, with lethargy and general langour

of the whole system. The pulse remains frequent, varying not more than from five to ten beats in the twenty-four hours. Although there may be no external indications of fever in the morning, yet upon examination, the frequency of the pulse is generally found to be about the same as when there is every external sign of fever. In the absence of the exacerbations, the pulse may lose some in volume, but rarely much in frequency. There is another constant and reliable symptom, of great importance in the diagnosis of this disease. After each alimentary evacuation, and especially if it be brought about by purgatives, the pulse will suddenly increase in frequency, and so remain for a long time, and only gradually subsiding by quiet, and a suspension of the alvine evacuations; and the longer this suspension lasts, the nearer will the pulse approach a normal standard, provided the torpidity does not continue an unreasonable time.

By a careful observation of the above named symptoms, together with those usually enumerated in works on diagnosis, much precious time may be saved, thus greatly enhancing the chances for life in the treatment of continued fever, as much depends upon the *early* application of proper remedies and regimen. A large majority of the fatal cases occurring in this disease are due mainly to improper treatment *before* the nature of the disease is clearly understood, and to a too free use of medicines *after* its true character is apprehended. This disease cannot be cut short by any remedial agents with which we are acquainted. The animal miasma, the exciting poison, must be expelled, by physiological forces, from the body. Those persons in whom the functions of absorption and elimination are most active, will recover soonest, and *vice versa*. In my humble judgment, the great fatality heretofore attending this disease, is dependent, not upon the disease itself, or anything essentially belonging to it, but upon adventitious circumstances, favored by the enervating influences of the disease.

Continued fever is, to a certain extent, infectious, often extending through whole families, and to others who remain long near the sick.

ARTICLE III.

The Contagiousness of the General Symptoms of Syphilis.

By FREEMAN J. BUMSTEAD, M. D., Professor of Venereal Diseases at the College of Physicians and Surgeons, New York.

The publication in the April number of this Journal of a highly interesting article by Dr. Sigmund, entitled, "Is Tertiary Syphilis Communicable," calls forth a few comments and suggestions, which, it is hoped, may not be without interest to the readers of the Archives.

The fact that any of the general symptoms of syphilis are contagious, has only of late years been placed beyond dispute. How and why it was so long ignored is known to every one, viz., through the great weight justly attached to the name of Ricord, who, however, confined his experimental inoculations of the secretion of general symptoms either to the patients themselves, or to persons already infected with syphilis; and since syphilis, like small pox, vaccinia, etc., is a diathetic disease, his inoculations were necessarily failures.

On the other hand, Ricord formerly admitted no radical distinction between the chancroid and true chancre, and since his inoculations proved the auto-inoculability of a large number of so-called "primary ulcers," the conclusion with him and his school was inevitable, that primary syphilis was communicable, and general syphilis not.

Alleged cases of the successful inoculation of secondary symptoms had indeed been reported by Wallace and others, but here there would appear to have been a stumbling-block in the way of the recognition of their value. In the history of all such cases, it was evident that the disease commenced in the recipient with a chancre, attended with its pleiad of indurated ganglia, and followed by the usual period of incubation preceding the outbreak of secondary symptoms. By some strange fatuity, it was thought that if a mucous patch was communicable at all, a mucous patch must be the result; that the secretion of a chancre alone could produce a chancre; and hence it was inferred that Wallace must have been mistaken regarding the source of his virus, and have taken it from a chancre, possibly in course of transformation into a mucous patch, as was known not unfrequently to occur.

The explanation of these difficulties—and it is so simple that it is a wonder it was never thought of before—was finally discovered; two diseases had been confounded under the name of syphilis, one of them local, the other constitutional; the former auto-inoculable, the latter not *auto-inoculable*, but inoculable upon, and communicable to, any person not already under the influence of the diathesis, in its secondary as well as in its primary stage. Moreover, it was found that this latter disease, from whatever stage its virus might be derived, would run its course, as any sensible disease would do, starting with its cradle (*chancre*), enjoying its youth (*secondary*), and advancing to its old age (*tertiary*). What disease is there, forsooth, that springs at once into full manhood?

Only twelve years have elapsed since 1856, when Langlebert first expressed the opinion, founded on but two cases, that secondary contagion would produce a *chancre*, and it was not until the abundant proof adduced in favor of this idea by Rollet in 1859, that the fact was generally accepted, or was even, generally known. The time which has since elapsed has evidently been too short for a full investigation of the limits of the contagiousness of the general symptoms of syphilis. In most of the reported cases, the infecting lesion has belonged to the secondary period, and has usually been a mucous patch. Independently of any greater degree of virulence of the syphilitic virus in the secondary, over the tertiary period, there are two reasons why mucous patches should be a fruitful source of contagion:

First. This lesion occupies those portions of the body, the orifices of mucous canals, where contact is most likely to take place with other persons (immediate contagion), or where the virus is most likely to be collected upon common household utensils and conveyed to others (mediate contagion).

Second. This lesion is one of the most persistent and most prone to return of all those belonging to syphilis.

Thus we find mucous patches upon the nipple of its wet-nurse, and those about vulva in women a fruitful source of primary syphilis upon the penis in men. I have met with a number of instances in which young men with *plaques muqueuses* upon the lips have inoculated the lips of their sweet-hearts; also with men, who in illicit intercourse contracted a primary sore in the neighborhood of the

mouth instead of the more usual situation, without any unnatural mode of indulgence.

Instances of mediate contagion from secondary lesions are also not uncommon. Take, for example, the case reported by Rollet, in which a housekeeper contracted syphilis by using a spoon shortly after it had been used by her cook, who had mucous patches on her mouth; take the extension of syphilis among the glass blowers in France, who use the same tube in common for blowing; also the repeated instances occurring in the practice of an aurist in Paris, in which this disease was conveyed to a number of patients by means of a eustachian catheter. I recently observed a case in which a young man contracted the disease through the medium of the mouth-piece to his pipe, which he lent a friend who called at his room, and which he smoked immediately afterwards. The most remarkable case I ever met with was a chancre developed upon the under surface of the upper eye-lid in a man who must have contracted the disease from a contaminated towel.

But, in addition to mucous patches, the contents of the pustules of ecthyma have been proved to be contagious (Vidal); and the virulence of the blood of syphilitic persons has been placed beyond dispute by Pellizari. Now that this latter fact is established, is there not reason to believe, that, although the syphilitic virus may be more contagious in the early than in the late stages of the disease, it does not entirely lose this power at any period of its activity?

Certainly, there is no such marked distinction between secondary and tertiary syphilis as would lead us to suppose that the former possesses a power which is entirely wanting in the latter.

The distinction, after all, between the two stages is mainly an arbitrary one, and patients often present symptoms belonging to both at the same time.

While the contagiousness of tertiary syphilis is highly probable, it is still difficult to point to cases which demonstrate it. The case reported by Dr. Sigmund, for instance, appears to me inconclusive on this point. Dr. S. states that his patient "was laboring under tertiary syphilis, and had also at that time some indolent sores on the inside of the lips." But to what stage of the disease did the sores, from which the virus was derived, belong? Were they syphilitic gummata? Probably not, because such very rarely occur

in this situation. It is much more likely that they were ulcerated mucous patches, so common about the mouth, of the secondary period, which had overlapped, so to speak, the development of tertiary symptoms on other parts of the body, as occurs so frequently, especially in cases of what may be called galloping syphilis. In the absence of further details, Dr. Sigmund's case must, therefore, be regarded as one of the communication of *secondary* and not of *tertiary* syphilis.

The least doubtful case of the contagiousness of tertiary syphilis that I ever heard of was one that I treated by letter a few years ago:

The patient was a well-known surgeon of the West, who was called upon to operate upon a case of extensive syphilitic necrosis of the cranium, in a patient who had had no secondary symptoms for a period of two years. One of the surgeon's fingers was abraded, and at this spot a chancre was developed a week or two afterwards, and was followed by the usual train of general symptoms. Such at least was the history communicated to me by this surgeon, who was also confident that he had not been brought in contact with a case of syphilis before for several years, and could have contracted the disease only from this operation. His age, standing, and powers of observation are such as to add great weight to his statements, and I am inclined to believe his opinion correct, yet the possible sources of error are so numerous, that I would not adduce the case as one beyond question.

Undoubted proof of the contagiousness of the late symptoms of syphilis to the point of demonstration must be sought for either in experimental inoculation of some of the few tertiary lesions which furnish a secretion necessary for the purpose, or in the clinical observation of cases in which all sources of error are absent.

Such proof, I believe, will yet be found.

ARTICLE IV.

Indigenous Remedies of the Southern States which may be Employed as Substitutes for Sulphate of Quinine in the Treatment of Malarial Fever. By JOSEPH JONES, M.D., Professor of Physiology and Pathology in the Medical Department of the University of Nashville, Tenn.

NO. 2.—DOGWOOD (*CORNUS FLORIDA*.)

Botanical Description—Geographical Distribution—Chemical Composition—Examination of by Dr. Walker, of Virginia, 1808—Dr. Walker's Receipt for making Ink from the Bark—Examination of by Mr. Carpenter, of Philadelphia—Cornine—Observations of Drs. Staples, S. Jackson, James Cockburn, D. C. O'Keefe—Medical Properties and Uses—Testimony of Dr. Walker, of Virginia, to the Medical Properties of Dogwood, of Dr. Gray, of Bristol, of Dr. Jacob Bigelow, S. G. Morton, R. Coates, D. C. O'Keefe, and others—Method of Preparing the Extract Dose—Experience of Author with in Southern Army During War, 1861–65; and, as a Substitute for Quinine, Possesses Prophylactic Powers against Malarial Fever—Efforts of Surgeon-General Moore and of Medical Purveyors to supply Indigenous Remedies—Testimony of Assistant Surgeon Warren and of Surgeon F. P. Porcher to the Medical Properties of Dogwood.

Botanical Character.—Arborescent; leaves ovate, acuminate; involucrum large; obcordate; drupes ovate. A tree fifteen to twenty-five feet high, the trunk eight to ten inches diameter, with expanding branches, the smaller crowded at the extremities of the older. Wood fine grained, hard, durable. Leaves opposite, deciduous, ovate, lanceolated, acuminate, entire, ribbed; the younger ones very pubescent, almost villous on the under surface. Flowers in terminal heads. Involucrum four leaved; leaves large, obcordate, nerved, white; the serius callous, sessile at the base of each head, and enclosing it before the time of flowering. Calyx one leaved, small, tubular, border four cleft; segments erect, obtuse, shorter than the tube. Petals four, linear, lanceolate, inserted into the summit of the germ, yellowish. Filaments four, as long as the corolla, alternating with the petals. Anthers incumbered, two lobed. Germ inferior, slightly angled. Style shorter than the stamens, surrounded at base by a glandular ring, around which the petals and filaments are inserted. Stigma capitate. Drupe red. Flowers March to April.—ELLIOTT. *Sketch of Botany of South Carolina and Georgia.* Vol. 1, pp. 207–208.

Geographical Distribution.—The *Cornus Florida* is first seen in Massachusetts, between the 42d deg. and 43d deg. of latitude, and extends uninterruptedly throughout the Eastern, Southern and Western States to the banks of the Mississippi. Although abounding especially in the Middle States, it is, nevertheless, one of the most common trees over this vast extent of country. In New Jersey, Pennsylvania, Maryland and Virginia it abounds upon moist, gravelly and uneven soil. In North Carolina, South Carolina, Georgia, Florida and Alabama it is generally found most

abundant and most luxuriant on the borders of swamps and low grounds, and scarcely ever in the pine barrens, where the soil is too dry and sandy to sustain any trees but the long leaf Pine (*Pinus Australis*), the Barren Scrub Oak (*Quercus catesbeia*), Upland Willow Oak, (*Quercus cinerea*), Black Jack Oak (*Quercus ferruginea*), and Running Oak (*Quercus pumila*). In the most fertile districts of West Tennessee and Kentucky it is said not to appear in the forests except where the soil is gravelly and of middling quality.

Chemical Composition.—The bark of the root, stem and branches of the *Cornus Florida* is a powerful bitter, possessing a bitter astringent and slightly aromatic taste. The chemical composition of this bark appears to have been first investigated by Dr. Walker, of Virginia, who published his observations in Philadelphia.* He found that water distilled from the bark in powder had a transparent, whitish appearance, with a slight aromatic odor, and no perceptible taste. When the heat was increased, the fluid had a lemon color, with an unpleasant smell and an acerb taste, effects which were probably produced by the volatilization and partial decomposition of portions of the bark in consequence of the continuance of the heat until the moisture was evaporated nearly to dryness. Dr. Walker also endeavored to ascertain the effects of different menstrua upon the extract furnished by evaporating a decoction of the root of *Cornus Florida*. Strong alcohol dissolved from the extract three-fourths of the entire quantity; the part which remained undissolved was destitute of taste, and underwent no change of color on adding the test of iron. The alcohol which contained the dissolved portion of the extract possessed an intensely bitter taste, with astringency; presented a clear, red color, and turned to a deep black on the addition of a salt of iron. When the alcohol extract was macerated in repeated portions of sulphuric ether, with a view to ascertain the quantity of resin, the ether acquired a dark color and a bitter taste; and dissolved three-quarters of the extract. When tested with iron it was found that the remaining quarter only was changed to a black color.† Upon the examination

* Experimental Inquiry into the similarity in virtue between the *Cornus Florida* and *Seringa*, and the *Cinchona Officinalis* of Linnaeus, &c., &c. By Dr. John M. Walker. Philadelphia. 1803.

† Dr. Walker gives a receipt for making an excellent ink, in which the bark of the *Cornus Florida* is substituted for gall nuts: Put half an ounce of dogwood bark, two scruples of sulphate iron and two scruples of gum arabic in sixteen ounces of rain water. During the infusion shake it repeatedly.

Dr. Walker announced that the dogwood contained gum, resin, tannin, and gallic acid. Dr. Walker thus sums up the results of his experiments: "A summary recapitulation of these experiments shows that the *Cornus Florida* and *sericea* and the Peruvian bark possess the same ingredients—that is, gum, mucilage and extract, which last contains the tannin and gallic acid, though in different proportions. The *Florida* possesses most of the gum, mucilage and extract; the *sericea* next, which appears to be an intermediate between the *Florida* and Peruvian bark; while the latter possesses most of the resin."

The virtues appear equally similar in their residue. The extract and resin possess all their active virtues. The extract appears to possess all their tonic power. The resin, when perfectly separated from the extract, appears to be purely stimulant, and probably the tonic power of the extract is increased when combined with a portion of the resin, as in the spirituous tincture.

Mr. G. W. Carpenter, of Philadelphia,* subsequently announced the discovery of a peculiar bitter principle, for which he proposed the name cornine, and which he asserted to be the active alkaloid principle of the *Cornus Florida*, and to be fully equal, if not superior, to quinine in its tonic and febrifuge properties. In consequence, however, of yielding this salt in so very minute comparative proportion to what the quinine is yielded by the cinchona, it is even more expensive than the latter. It is greatly to be regretted that Mr. Carpenter did not publish the method by which he extracted this alkaloid principle. Some have even gone so far as to affirm that he did not discover any alkaloid principle at all, because subsequent investigations have failed to detect cornine. We conceive this criticism to be entirely too severe, for three reasons:

1. No absolutely accurate and complete examination of the bark of the *Cornus Florida* has been made.
2. As Mr. Carpenter did not state his method of obtaining the active principle, it might be supposed that the reagents used have exerted some influence in the transformation as well as the separation of the alkaloid principle.
3. Mr. Carpenter affirms that he submitted the alkaloid cornine to the examination of several physicians.

* Essays on some of the most important articles of the Materia Medica, &c. By G. W. Carpenter. Philadelphia. 1824. Page 202.

This subject is of so much interest and importance that we quote the entire passage from the work of Mr. Carpenter:

"It gives me much pleasure to announce the discovery which I made of an alkaloid base in the *Cornus Florida*, which I have denominated Cornine, and which, with acids, forms neutral salts, the sulphate of which has proved a highly valuable tonic and febrifuge. This article has been very carefully and accurately described by Dr. Samuel G. Morton, of this city, in the *Philadelphia Journal of the Medical and Physical Sciences*, and from the most respectable sources in the medical profession from various parts of the United States where this article has been sent, the most corroborating evidences have been received of the unequivocal success of the Cornine in the treatment of intermittent and remittent fevers, in the same doses as the quinine; and the only circumstance which precludes its competition with that substance is the minute comparative proportion of Cornine yielded by the *Cornus Florida*. If, however, at any time we should fail in our supplies of Cinchona, which is not impossible, or even improbable, we shall then be able to supply its place by this principle of the *Cornus Florida*."

—Essays on the most important Articles of the Materia Medica. Page 203.

Dr. S. G. Morton,* of Philadelphia, described cornine as a grayish-white powder, extremely bitter, and deliquescent when exposed to the air, and affirmed that he had exhibited it in cases of intermittent fever with much success. Dr. Morton considered it to be in no respect inferior to quinine.

Dr. R. Coates, and several other practitioners, exhibited this salt in the same cases in which sulphate of quinine is employed, and with decided success.

Cornia, according to Mr. Carpenter, does not crystallize, but forms, on evaporation, a viscid mass. It is a pale straw color, attracts the moisture of the atmosphere, and dissolves in alcohol and in sulphuric, acetic and muriatic acids, with which it forms crystallizable neutral salts. The sulphate crystallizes in acicular or needle-like crystals, deliquescent, and consequently soluble in water, of a grayish-white color, and its taste is intensely bitter. According to the testimony of Joseph Torgo,† M.D., and E. Durand, of Philadelphia,

* *Philadelphia Journal of the Medical and Physical Sciences.*

† A Manual of Materia Medica and Pharmacy, comprising a concise description of the articles used in Medicine. By H. M. Edwards, M.D., and P. Vavasseur, M.D. Translated from the French by Joseph Tongo, M.D., &c., and E. Durand, &c. Philadelphia, 1839.

Dr. Staples obtained it by digesting the bark of the root of the *Cornus Florida* in alcohol of 30 deg. of Panm 's areometer. After several days had elapsed, the latter was filtered and concentrated by distillation in a water bath. On cooling a granular extract was obtained, of a light pink color, of a very bitter and astringent taste; when treated with diluted sulphuric acid, afforded a very small quantity of crystals of sulphate of cornia, without having been exhausted of all its bitterness and astringency.

Mr. Ellis states that Dr. S. Jackson, lately of Northumberland, Pennsylvania, informed him that he had subjected the bark to Henry's process for obtaining quinine from cinchona, and that without carrying the process so far as to obtain a crystalline salt, he used the concentrated alcoholic solution with most decisive results, and was satisfied that it contained a principle analogous to quinia.

Mr. James Cockburn examined the *Cornus Florida* in 1835, with the following results:

The decoction, which was of a light red color, and slight mucilaginous appearance, formed a precipitate with a solution of subacetate of lead, which consisted of gum, coloring matter, and other foreign substances. A precipitate was also formed with pure alcohol. Upon the addition of water to the tincture, concentrated by evaporation, it threw down a curdy precipitate, which, upon examination, was found to be resin.

The decoction and tincture redden litmus paper, and cause a yellowish precipitate in a solution of gelatine, and one of a dark olive green in a solution of sulphate of iron. They also afford precipitates with sulphuric and muriatic acids, lime water, alumina, the carbonates of ammonia and potassa, tartrate of antimony and potassa. The color becomes lighter on the addition of nitric acid, milky by the corrosive chloride of mercury, and has its color deepened by ammonia.

A portion of the bark was digested in sulphuric ether for a few days and filtered. The ethereal tincture was of a lemon color, and reddened litmus paper, and on evaporation deposited on the sides of the vessel a fatty matter, insoluble in water, but soluble in alcohol, leaving a greasy stain on paper. Besides this there was a compound of oil and resin combined with coloring matter, and a substance of a light brown color, very bitter taste, friable and very regular appearance, supposed to be a compound of a peculiar bitter principle;

mixed with tannin and other matters. This was dissolved in alcohol, and formed a beautiful red colored tincture, which reddened litmus paper. A substance resembling the ethereal residue remained, interspersed with small, shining acicular crystals, of a bitter taste, which property I am disposed to believe they owed to the bitter extract with which they were associated. The bark used in the last experiment was submitted to the action of boiling ether, which, on cooling, deposited a substance of the consistence of wax, which it resembled in all its properties.

Two ounces of the bark, coarsely powdered, were then introduced into 3 viii. of alcohol, and exposed to a temperature of from 105 deg. to 120 deg. F. The alcohol was then decanted, and a fresh portion added and treated as before. The liquors were then united, and a solution of subacetate of lead added to separate the coloring matter. After the insoluble portion subsided the clear liquor was separated, a little sulphuric acid was then added to the solution to separate any excess of subacetate of lead. This was filtered and the alcohol distilled off. There remained in the retort only an oily-like substance, together with a principle of a dirty white color, curdled appearance, resembling the residue of the ethereal tincture. Ammonia was then added to the liquor to precipitate any principle remaining in solution. The residue was then treated with a little sulphuric acid, water and animal charcoal (previously treated with muriatic acid), which, upon evaporation, deposited an abundant crystalline mass, of a flaky appearance, resembling at first sulphate of quinine, but on cooking assumed a feathery appearance, with a sharp, saline taste, soluble in hot and cold water, insoluble in alcohol and ether, soluble in nitric acid, and resembled sulphate of ammonia in all its properties.

One pound of coarsely powdered bark was boiled for half an hour in one gallon of water, acidulated with 3 ias. sulphurid acid. The tincture was poured off and treated with animal charcoal, and when evaporated left a brown extract of a resinous, waxy appearance, and very bitter taste, which appeared to have very much the flavor of Peruvian bark. This was again treated with animal charcoal, and left, on evaporation, a crystalline mass in an impure form, which was slightly soluble in alcohol, almost insoluble in ether, but very soluble in nitric acid. The alcoholic solution was evaporated, and left crystals of a very fine, long, flexible

and silky appearance, which crystals decomposed when thrown upon red coals, and did not form a precipitate with oxalate of ammonia, but were without taste. The bitterness was entirely owing to the bitter extract, which was slightly soluble in water, soluble in alcohol, but nearly insoluble in ether. This I propose to call bitter extractive; and in this, I am inclined to believe, the active principle resides.

A concentrated tincture yielded by evaporation a dark brown extract, slightly soluble in water, soluble in alcohol and ether, bitter aromatic taste, possessing the properties of resin. Both this and the watery extract possess the sensible properties of the bark in a concentrated form.

There is a red coloring principle in this bark, taken up very feebly by alcohol and ether, but less so by water, and has its color rendered deeper by an alkali.

One thousand grains of the bark yielded, by incineration, a product weighing sixty-five grains. This residue was submitted to the action of boiling water, and concentrated by evaporation; it then had an alkaline taste, effervescent strongly with acids, and restored the blue color to litmus, previously reddened by an acid. It was then neutralized with nitric acid, and upon evaporation yielded crystals of nitrate of potassa.

The insoluble residue of the preceding experiment was dissolved by nitric acid (with the exception of a minute portion of carbonaceous matter), with violet effervescence. The colorless solution thus obtained threw down a white precipitate, on the addition of oxalate of ammonia, and a deep blue one with ferrocyanate of potassa. It produced also a dark green or black with tincture of galls. Carbonate of soda, when added to the solution, caused a white flocculent precipitate. On adding a solution of phosphate of soda, no change was immediately produced, which led to the belief that a salt of magnesia was present.

From the result of these few and imperfect experiments, we may venture to enumerate the following as among the principal constituents of the *Cornus Florida*: 1. Gum; 2. Resin; 3. Tannin; 4. Gallic Acid; 5. Oil; 6. Fatty Matter; 7. a Crystalline Substance; 8. Bitter Extractive; 9. Wax; 10. Red Coloring Matter; 11. Lignin; 12. Potassa; 13. Iron. To which may be added Salts of Lime and Magnesia—*Cornus Florida*, by James Cockburn, Jr. Extract from Thesis. Phil. Col. of Phar. American Journal of Pharmacy. July, 1835. New Series. Vol. 1. Pages 111-114. 2

Dr. D C. O'Keefe, whilst a student of medicine in the Medical College of Georgia, published a valuable article on the chemical constitution and febrifuge properties of dogwood bark, in which he states that, with the assistance of Dr. Robert Campbell, he had determined upon and conducted the following process for obtaining cornine:

Pulverize two pounds of the well dried bark of the root; separate its tannin with sulphuric ether, and filter. Macerate the separated bark in alcohol for two days to extract its resin and cornine. Pour off the alcohol, and precipitate the resin with water. Filter off the resin, and precipitate the cornine from the liquor with a solution of subacetate of lead. Separate the subacetate of lead from the solution by passing a current of sulphuretted-hydrogen gas through it. Filter and evaporate the fluid down to the cornine.

This substance is possessed of decided acid properties, having a well marked acid reaction. It is of a dark straw color, very bitter and astringent.—*Southern Medical and Surgical Journal. January, 1849. Pages 6-7.*

Dr. O'Keefe cites the testimony of Professor Gegier, of Heidleberg, as confirmatory of the results of his examination of the acid properties of cornine.

It is evident, from the discrepancies in the statements and views of these various observers, that the analyses of dogwood, thus far published, are not sufficiently thorough and accurate, and that the profession needs more extended and definite information with reference to the chemical and physical properties of this valuable indigenous plant.

Medical Properties and Uses.—The bark of the dogwood has been known and successfully used in the treatment of intermittent fevers for more than one hundred years.

Upon the human body the bark of the *Cornus Florida* acts as a tonic, astringent and antiperiodic, and resembles in its general effects Peruvian bark.

Dr. Benjamin Smith Barton, in the *Philadelphia Medical and Physical Journal*, of 1805, says: “The bark of the *Cornus Florida*, or common Dogwood, does more than support its former reputation. It was used with much success in the generally prevailing intermittents of Maryland and Virginia in 1804. By some respectable practitioners, it was deemed but little inferior to good Peruvian bark.” Page 181.

Dr. Walker, by numerous experiments with it upon the healthy system, determined that it uniformly increased the

force and frequency of the pulse, and augmented the heat of the body. He instituted collateral experiments with the Peruvian bark, and found that both its internal and external effects agreed with those of the *Cornus*.

Dr. Gregg, of Bristol, Pennsylvania, states that after employing the *Cornus Florida* for nearly twenty-three years in the treatment of intermittents, he was satisfied that it was not inferior to Peruvian bark, and that he had found it uniformly beneficial as a tonic in cases of debility. Among the number of cures by this medicine was that of his own case. Dr. Gregg estimated thirty-five grains of it equal to thirty grains of Peruvian bark, and observed that the only inconvenience accompanying its use was that, if taken within a year after being stripped from the tree, it sometimes occasioned acute pains in the bowels; but this evil was remedied by adding to it five grains of Virginia snake root (*aristolochia serpentaria*.) He recommends the bark as being in the best state after it has been dried a year.

In an intermittent fever, which prevailed many years ago in West Jersey, it is said to have proved, generally speaking, more beneficial than Peruvian bark.

Drs. Jacob Bigelow, S. G. Morton, R. Coates, and many other medical men, have employed this bark with advantage in intermittents and in debilitated states of the system, accompanied with loss of appetite and indigestion. I have myself used it with good success in the treatment of our climate fevers.

In the Southern part of Georgia I have known the planters to employ it extensively amongst their people, in combination with the wild cherry bark and wild horehound, (*eupatorium pilosumo*) not only in the treatment of intermittent fever, but also in colds and dropsies, and in all cases of debility accompanied with loss of appetite and indigestion.

Dr. B. S. Barton states that a decoction of the dogwood bark was found very useful in a malignant disorder of horses called "yellow water."

Dr. D. C. O'Keefe, in the article previously referred to, gives an interesting account of the physiological, as well as the therapeutic action of the extract of dogwood, and supports his views by fifteen accurately detailed cases of intermittent fever.

In order to ascertain with precision the effects of large doses of the extract on the system in a physiological state, Dr. O'Keefe instituted the following experiment upon himself:

10 A. M., first dose, 30 grs. extract; pulse previous to taking it, 72.

11 A. M., second dose, 30 grs.; pulse intermittent, 72-76; temperature of surface somewhat augmented; general perspiration; a sense of fullness, and slight dull pain over the frontal eminences, much increased on flexing the head forward and downward; uneasy feelings in the stomach and bowels.

12 M., third dose, 30 grs.; pulse 76, not intermittent, but somewhat depressed; sensation in the head uniform. On taking this dose, a sense of warmth was felt in the stomach, and radiated over the surface of the trunk.

1 P. M., fourth dose, 30 grs.; pulse 76, and regular; pain in the head augmented, and extended down the forehead to the eye-lids, with a disposition to sleep; slight oppression in the precordia.

Eating dinner neither mitigated nor heightened the dull headache, which continued the same throughout the day. At night tendency to sleep much more urgent. Retired early; slept well during the night, and arose in the morning free from any uneasy sensations whatever.—*Southern Medical and Surgical Journal, January, 1849. Pages 10 and 11.*

The discrepancies between the effects observed by Dr. O'Keefe and Dr. Walker may have been due to the fact that the former used the extract and the latter the bark. Be this as it may, it is nevertheless true that the profession needs an extended series of experiments upon the action of the various preparations and constituents of the *Cornus Florida*. Until these data are supplied, it would be worse than useless to attempt any critical analysis and description of its physiological effects.

Dr. O'Keefe not only substantiates the testimony of various physicians to the great value of dogwood in the treatment of malarial fever, but he also establishes the fact that the extract has no tendency whatever to disturb the stomach and bowels. This is important, for the alleged tendency of the *Cornus* to disturb the stomach and bowels mentioned by so many writers has exerted no little influence in causing this valuable remedy to remain neglected.

According to Mr. Carpenter, the *Cornus Florida* yields a beautiful extract, resembling very closely that of *Cinchona*, differing, however, in its sensible characters from the extract of the superior species of Peruvian bark, by being less bitter and more astringent. The following is the most eligible mode for preparing this extract:

Evaporate in a sand or water bath a tincture of the bark, made by digesting it in proof spirits in the proportion of two ounces of the former to a pint of the latter, suffering it to stand for at least a week before straining; occasionally during this time submitting it for a few hours to a moderate heat, and thereby facilitating the solution. This extract, from its most prominent and sensible characters, is unquestionably much more active than the common extract of *Carthagenæ* bark, and is a preparation admirably adapted in all cases where the *Cornus* may be employed with advantage; and in consequence of being a concentrated preparation, separated from the ligneous and insoluble portions, and containing less gum and mucous matter, (which constitutes so large a portion) is certainly much preferable to the crude substance, and no doubt will be resorted to by many country practitioners as a useful expedient, particularly in those places where this article is in profusion, and where bark of a good quality is frequently very scarce, and sometimes even unknown.—*Essays on Materia Medica, &c., by G. W. Carpenter.* *Pages 203-204.*

The extract thus prepared has been exhibited with success by several practitioners, in the same doses as the alcoholic extract of *Cinchona*.

Dose of extract of *Cornus Florida*, from gr. x to 3 ii, repeated as often as the case demands. Dose in powder, from twenty to thirty grains, to be repeated according to circumstances. It may also be given in decoction, made with an ounce of the bark to a pint of water, of which the dose is from an ounce to two ounces. In some parts of the country the ripe berries infused in brandy have been used as bitters, and the infusion of the flowers is said to form a good substitute for chamomile tea. A decoction of the buds and twigs has been thought to agree better with weak stomachs than the other preparations.

During the recent war, in both civil and military practice, I have used the decoction and tincture of dogwood to a considerable extent, and found the remedy of value in the

treatment of malarial fever. In the severe cases the paroxysm was arrested with sulphate of quinine, and the patients were then put upon the dogwood, to secure the tonic as well as the antiperiodic properties. I also employed in military practice in the treatment of intermittent fever, with most satisfactory results, a mixture composed of the tincture of dogwood, nitric acid and common salt. The following is the formula most generally employed:

B.—Saturate tincture of dogwood bark, f. $\frac{3}{4}$ xij.; nitric acid (concentrated), f. $\frac{3}{4}$ i.; common salt (chloride of sodium), $\frac{3}{4}$ i. Mix tablespoonful in cup of water every four hours, sucked through a quill.

Under this preparation not only was the recurrence of the chills prevented, but the sallow, jaundiced complexion of the soldiers, who had long been exposed to the action of malaria, assumed the clear hue of health. Both the nitric acid and the common salt in this mixture were also efficient agents in breaking up the paroxysms, and in causing such an increased action of the liver and kidneys as removed the effete compounds resulting from the prolonged action of the malarial poison.

As far as my personal investigations extend, I was led to the belief that the tincture of dogwood possesses decided prophylactic powers against malarial fever.

The compound tincture of dogwood was issued by the Medical Purveyors to the Confederate troops serving in damp, swampy, marshy, malarious regions with good effects in protecting the troops against malaria.

Thus the Eutaw (25th South Carolina) regiment, whilst it was encamped upon James' Island, in a locality notorious for the prevalence of malarial fevers of the severest character during the summer and fall months. This regiment had a mean strength of near eight hundred officers and men. During the summer and autumn of 1862, as large a proportion as one-third of the mean strength were at times upon the sick list with the various forms of malarial fever.

The assistant surgeon of this regiment, J. W. Warren, of South Carolina, communicated to the author, during his inspection of the sick upon James' Island, some interesting facts upon the prophylactic powers of certain indigenous remedies.

A compound tincture, or medicated whisky, prepared by the Medical Purveyor from the dogwood, cherry, poplar and

willow barks, was administered daily, in the proportion of one-half to one gill to each man during two weeks in the month of September, 1862. Under the use of this tonic mixture the number of new cases of malarial fever diminished one-half, although as the autumnal season advances upon James' Island malarial fevers increase in number and severity. The supply of this medicated whisky being limited, at the end of two weeks it was exhausted, and in the course of eight days the cases of malarial fever had increased from thirty-six to eighty. A fresh supply having been obtained, its use was again commenced, and in the course of five days the number of cases of malarial fever fell to the original number.

In the absence of quinine, a strong tincture of these barks was used with good effects in the treatment of malarial fever. I requested Assistant Surgeon Warren to continue these experiments, with certain variations, designed to determine the active and the inert ingredients in the tincture, and also indicated a plan by which the prophylactic powers of dogwood might be fairly tested.

Dogwood received the special attention of the Surgeon-General, S. P. Moore, of the Confederate States army, and of the Medical Purveyors, at an early period in the war, as will be seen from the following official papers :

CIRCULAR.

CONFEDERATE STATES OF AMERICA,
SURGEON-GENERAL'S OFFICE.
Richmond, Va., Dec. 5, 1862.

Medical Purveyor. C. S. A.:

SIR—Below you will find a formula for a compound tincture of the indigenous barks, to be issued as a tonic and a febrifuge, and substituted, as far as practicable, for quinine.

Very respectfully, your obedient servant,

SAMUEL P. MOORE, S. G., C. S. A.

Dried dogwood bark 30 parts.

Dried poplar bark 30 parts.

Dried willow bark 40 parts.

Whisky 45 degrees strength.

Two pounds of the mixed barks to one gallon whisky.

Macerate fourteen days and strain.

Dose one fluid ounce (f. 3 j) three times a day.

CIRCULAR NO. 12.

CONFEDERATE STATES OF AMERICA,

PURVEYOR'S OFFICE,

Richmond, Va., August 22, 1862.

—, Medical Purveyor, C. S. A.:

SIR—Although no orders have been issued to that effect, some of the Purveyors appear to be under the impression that they should make a mixture of the indigenous barks (dogwood, &c.,) and whisky. The arrangement intended by the Surgeon-General and Commissary-General is, that the Commissary Department shall furnish the whisky to the troops, giving each man one drink a day. The Purveying Department was to furnish the barks to mix with the whisky, to make a species of army bitters, as a preventive against malaria, &c. The arrangement is merely an issue of whisky by the Commissary Department to the troops, and the Purveying Department furnish the bark to mix with it. This office has not as yet been instructed whether the mixture is to be made at the Purveying depot or at the Commissary depot. Therefore, whisky will not be issued in any other than the medical preparations that have been, or may be, ordered as regular issues.

Very respectfully, your obedient servant,
E. W. JONES, Chief Med. Purv. C. S. A.

CIRCULAR NO. 19.

CONFEDERATE STATES OF AMERICA,

MEDICAL PURVEYOR'S OFFICE,

Richmond, Va., November 1, 1862.

—, Medical Purveyor, C. S. A.:

SIR—Your attention is called to the following extract from Carpenter's Essay on the *Materia Medica*:

* * * "The *Cornus Florida* yields a beautiful extract, resembling very closely that of *cinchona*, differing, however, in its sensible character from the extract of the superior species of Peruvian bark, by being less bitter and more astringent.

"The following is the most elegant mode for preparing this extract: Evaporate in a sand or water bath a tincture of the bark made by digesting it in proof spirits, in the proportion of two ounces of the former to a pint of the latter,

suffering it to stand at least a week before straining, occasionally during the time submitting it for a few hours to a moderate heat, and thereby facilitating the solution.

"This extract, from its most prominent and sensible character, is unquestionably much more active than the common extract of Carthagena bark, and is a preparation admirably adapted in all cases where the *Cornus* may be employed with advantage, and in consequence of being a concentrated preparation, separated from the ligneous and insoluble portion, and containing less gum and mucous matter (which constitute so large a portion), is certainly much preferable to the crude substances, and no doubt will be resorted to by many country practitioners as a useful expedient, particularly in those places where this article is in profusion, and where bark of a good quality is frequently very scarce, and sometimes even unknown.

"The extract thus prepared has been exhibited with success by several practitioners, in the same doses as the alcoholic extract of cinchona.

"Dose of extract of *Cornus Florida* from ten grains to two drachms, repeated as often as the case demands."

This preparation appears to be a desirable one, and you will accordingly include it among those to be prepared for issue.

Very respectfully, your ob't serv't,
E. W. JONES, Chief Med. Purveyor.

OFFICE MEDICAL PURVEYOR,
Montgomery, Ala., Feb. 11, 1863.

—, *Medical Purveyor, C. S. A.:*

SIR—Yours of the 9th. inst., has been received. I can send you thirty-five pounds spts. nitre dulce. I am preparing it, but will be out of nitric acid in a day or two. If you can send me some nitric acid I can manufacture spts. nitre for you. I have a few pounds of aqua ammonia to spare, and can make you some if you can procure for me muriate of ammonia. I can send you fluid extract sarsaparilla, tinct. muriate iron., fluid extract of blackberry, tinct. of dogwood, poplar and willow, solid extract podophyllum, syrup of squills, solid extract of dogwood, syrup wild cherry. All these I am manufacturing in considerable quantity. I am now making aether sulph. in order to make tannin. and chloride of lime for making chloroform, both of which I shall manufacture this month.

The fluid extract of blackberry I can recommend as a capital astringent in dysentery and diarrhoea. The extract

of podophyllum is a safe and thorough purge. The extract of dogwood is a good substitute for quinine. The tinct. of dogwood, poplar and willow is used in the hospitals here in large quantities. All these preparations are made with care.

Your obedient servant,

Wm. H. ANDERSON, Med. Purveyor.

The following observations upon the medicinal properties of the *Cornus Florida* (dogwood) appeared in a valuable work, prepared by Surgeon Francis Peyre Porcher, M. D., of Charleston, South Carolina, and published by order of the Surgeon-General, C. S. A., 1863 :

Cornus Florida (Dogwood).—This well known plant possesses tonic and antiperiodic properties very nearly allied to those of cinchona. In periodic fevers, one of the most valuable of our indigenous plants. Dr. Gregg states that after employing it for twenty-three years in the treatment of intermittent fevers, he was satisfied that it was not inferior to Peruvian bark. Generally given in conjunction with laudanum. It also possesses antiseptic powers. In the recent state it is less stimulating than the cinchona bark, but it affects the bowels more. The dried bark is the preferable form. The fresh bark will sometimes act as a cathartic. It is more stimulating than thoroughwort (*eupatorium*), and, therefore, is less applicable during the hot stages of the fever. * * In our present need of astringent antiperiodics and tonics, the dogwood bark powdered will be found the best substitute for the Peruvian. Internally and externally, it can be applied wherever the cinchona barks were found servicable. The dogwood bark and root in decoction, or in form of cold infusion, is believed by many to be the most efficient substitute for quinine, also in treating malarial fevers. Certainly it might be used in the cases occuring in camp to prevent the waste of quinine, as it can be easily and abundantly procured.

Dr. Richard Moore, of Sumpter district, informs me that he not only finds it efficient in fevers, but particularly useful, with whisky or alcohol, in low forms of fevers and dysentery occurring near our river swamps.

During convalescence, when an astringent tonic is required, this plant supplies our need. See *Eupatorium* (*Boneset*) and *Liriodendron*. These, with the blackberry and chinquapin as astringents, the gentians and *pipsisswa* as tonics and tonic diuretics, the sweet gum, sassafras and beni for their

mucilaginous and aromatic properties, and the wild jalap (*podophyllum*) as a cathartic, supply the surgeon in camp with easily procurable medicinal plants, which are sufficient for almost every purpose. Nitrate and bi-carbonate of potash are most required, and, with calomel, may be procured from abroad. Our supply of opium can be easily procured by planting the poppy and incising the capsules. Every planter could raise a full supply of opium, mustard and flaxseed. The wood of the dogwood, like the willow, is preferred in making gunpowder. See *Salix*.

A tonic compound, as advised by the herbalists, is made with the bark of the dogwood, columbo (*frasera*), poplar, each six ounces; bark of wild cherry, six ounces; leaves of thoroughwort, four ounces; cayenne pepper, four ounces, sifted and mixed. Dose, a teaspoonful, in warm or cold water, repeated.

It is stated in the Newbern *Progress* that a ripe dogwood berry taken three times a day, before meals, will cure ague and fever.

My friend, Professor F. A. P., contributes the following to the Charleston *Courier*:

[The dogwood bark, powdered, may be used in place of the Peruvian mentioned.]

Dutch Remedy for Fever and Ague.—As quinine is very scarce, it may not be unprofitable, both to our armies and private families, to revive the memory of an ancient remedy, which was in almost universal use before the introduction of the former drug. It was known by the name which heads this article, and has been used from time immemorial among the Huguenot families of the Santee, among whom there is a tradition that it was brought to this country by the ancestor of one of the families, who was a physician. The remedy quoted below is copied from an old receipt book. Though not a professional man, I can speak for its efficacy when it was in vogue:

The Recipe.—Two ounces of Peruvian bark, two ounces of cream of tartar, sixty cloves.

Manner of Using It.—These ingredients are to be rubbed together in a mortar. The mixture to be divided into twenty-four doses, four of which (mixed in water) are to be given the first day, four on the second, and two on every succeeding day, until the whole shall have been taken. It is probable that the disease will be arrested on the second

or third day; but the object in taking the whole prescription is to complete the cure by its tonic property.

The berries of the dogwood have also been highly recommended; given as a remedy for fever in place of quinine (1862). One or two given in form of pill.—*Resources of the Southern Fields and Forests, Medical, Economical and Agricultural, &c., by Francis Peyre Porcher, M. D., Surgeon, P. A. C. S. 1863. Pages 59-62.*

NO. 3.—*CORNUS CIRCINATA, wild (ROUND-LEAVED DOGWOOD), AND CORNUS SERICEA, wild (SWAMP DOGWOOD).*

The ten species of *Cornus* indigenous to the United States are all supposed to possess similar medicinal properties. With the exception of the *Cornus Florida*, the two now under consideration have been most carefully investigated. Our knowledge, however, of both their chemical and medicinal properties is not only more imperfect than that of the *Cornus Florida*, but is vague and meagre. Professors Mason and Ives appear to have been the first to introduce the *Cornus Circinata* into medical practice. They recommend it very highly for its astringent and tonic properties, and affirm that they have successfully used it in intermittent fevers and dysentery. Mr. Carpenter announced that the alkaloid principle, cornine, exists in this species of *Cornus*.

The alcoholic extract appears to be the most eligible mode of using this article. The extract is prepared in the same manner with that of the *Cornus Florida*. It possesses more astringency, and is, therefore, better adapted to the treatment of dysentery. As this plant appears to be rare in most of the Southern States, it is not likely that it will ever be extensively employed, especially as the *Cornus Florida* is not only more abundant, but also fully as efficient. The bark of the *Cornus Sericea* (swamp dogwood) was found by Dr. Walker to be equal to that of the *Cornus Florida*, and but little inferior to the common pale Peruvian bark in the treatment of intermittents. It forms a beautiful tincture with proof spirits.

As the swamp dogwood inhabits the North American continent from Canada to Florida, growing in moist woods, in swamps, and on the border of streams, especially in the mountains, it is well worth the attention of the physicians of the United States.

The dose and modes of preparation and administration are the same with those of the *Cornus Florida*.

ARTICLE V.

Physiological View of the Nervous System, and its Disorders. By E. A. KUNKLER, M. D., of Placerville, Cal.

CHOREA.—This affection is characterized by irregular motions, or involuntary chronic contractions of some of the voluntary muscles; but some of the involuntary muscles are sometimes also involved, and even the intellectual faculties, in which case there is at the same time a certain degree of fatuity. Generally, however, there are only twitches of the muscles of the face, or convulsive contractions of the fingers, arms, or legs. But occasionally cases have been observed with violent contortions, rotary motions of the whole body, or an irresistible impulse to move in a determined direction, to leap, or to dance; whence this malady has also derived the name of St. Vitus' Dance, from a monastery in Germany, where some of such cases had formerly been cured.

In chorea volition is not suspended. The voluntary motions are regular, except those of the affected parts, which are interfered with by involuntary motions. These affect sometimes also the muscles of respiration, of deglutition, and of speech, producing more or less stammering.

The tremors in old age, in hard drinkers, in workers of mercury and lead, and in typhoid affections, which are generally considered to depend on general debility of the muscular and nervous systems, are probably but a derangement of the functions of the nerve-centre which co-ordinates or perfects the complicated voluntary motions, and are therefore a variety of chorea.

The experiments of M.M. Magendie, Flourens, and others, have indeed proved that when the cerebellum of animals is irritated, convulsive motions arise; that when it is injured, rotary motions—an irresistible impulse forward or backward is given to the animal, according to the particular place which has been hurt; and that when certain parts of the medulla oblongata are damaged, other kinds of involuntary motion are produced. The cerebellum, therefore, has been considered to be the nerve-centre by which the complicated muscular voluntary motions are co-ordinated, while the medulla oblongata, the spine, and the sympathetic ganglia, each in its own sphere, occasion the various invol-

untary motions. Hence there can be no doubt that, in the different forms of chorea, when voluntary muscles are disturbed in their motion, it proceeds from some lesion or irritation of some part of the cerebellum; that when the motion of the involuntary muscles is abnormal, either the medulla oblongata or the spine is involved; and that when the intellect is deranged, some part of the cerebrum proper must be disordered: these derangements causing an over-accumulation of arterial blood, or of oxygen, in the cells of the affected nerve-centre, and altering or preventing thereby the physiological action of these nerve-cells.

That in chorea, the mind and some of the voluntary and involuntary muscles are sometimes at the same time disordered, can be explained by the fact that many nerves are composed of one or more bundles of nerve-fibres, which, when afferent, are connected with nerve-cells possessed of different powers, seated in different nerve-centres; for the constituent fibres of a nerve do not all run to the same point of termination. The irritation of such bundles of nerve-fibres, therefore, will be transmitted to different localities, and thereby create a variety of complex mental and motional phenomena.

This malady is sometimes combined with hysteria, or with epilepsy, when it assumes a mixed character. If uncomplicated, it does not in most cases manifest itself by regular, intermittent paroxysms, but generally its attacks last a certain time, without intermission.

Chorea is common among young people, from six to sixteen years of age—between the second teething and the age of puberty—but it may occur at any age. It is more often met with in girls than in boys. It is seldom severe and lasting, and scarcely ever proves fatal. In children it yields readily with the subsidence of the dental or intestinal irritation; and in girls, with the regular establishment of the catamenia, with which it is generally connected. However, any other source or cause of irritation may also produce this affection, especially injuries to the posterior part of the head, whereby the free action of the cerebellum is interfered with, or some part of its gray substance is altered.

A plethoric state alone is not likely to occasion chorea, but by supplying all the nerve-centres with an excess of arterial blood, it is apt to become a predisposing cause of this malady. In workers of mercury or of lead, the tremors

are evidently the result of the absorption of these metals into the blood, by which they are carried to the nerve centres, especially to the cerebellum, when they become a source of irritation. In old age or in typhoid affections, they are clearly the effect of irritating substances, formed and retained in the blood by imperfect elimination, whereby the nerve-centres receive an inadequate nutrition and are irritated at the same time.

In most persons who have died while they were affected with chorea, no lesion whatever has been found in the encephalon which could have been referred to this malady, though sometimes turgid bloodvessels, effusion in the ventricles, or some other alteration has been observed in the brain; probably in cases of long standing, by the long continuance of the irritation, these lesions or alterations had been produced.

For the empirical treatment of chorea, a variety of remedies have been recommended. However, it is obvious that such remedies can be beneficial only if they are capable of removing the irritating causes, or of correcting the organic derangements on which the nervous affections are dependent; and that in each case it is necessary, by a correct diagnosis, to determine the true pathological state, and to correct any organic derangement or other source of irritation by appropriate means.

Case 1st.—A boy, seven years of age, became affected by twitches of the muscles of his face, and his parents, not knowing what it was, consulted me on the subject. I found that his gums were swelled, and that he was cutting his molar teeth. This being clearly the cause of the nervous disturbance, I lanced his gums, and as soon as the dental irritation subsided, the twitches ceased also.

Case 2d.—A boy, five years of age, of a weak constitution, became affected by lateral twisting of his right leg, which interfered considerably with locomotion. Being informed by his mother that he was often rubbing his nose, and that during the night he was grinding his teeth, there could be no doubt of the existence of intestinal irritation, produced either by worms or by bad digestion. I therefore prescribed some Ol. Chenopodii, to be taken morning and night, to be followed the morning after by a brisk cathartic. Through its action no worms were brought away, but inasmuch as the nervous disturbance subsided, it was

evident that it had depended on irritating matter in the gastro-intestinal canal, which was expelled by the purgative.

Sometimes chorea is connected with more complicated causes, which must be correctly considered, if we wish to be successful in its treatment.

Case 3d.—A young girl, fifteen years of age, of a delicate and weak constitution, became affected with twistings of her right arm, and her periods having not yet appeared, it was held by her physician that the protracted appearance of the menses and the nervous affection were both dependent on her general debility, for which different preparations of iron were prescribed. This treatment, however, failed to produce the desired effect.

When I saw this patient, I found—her complexion being yellowish and her lips red, not white—that there was no anemia. I ascertained also that her bowels were irregular and often constipated, that her spine was tender or sensitive on pressure at different places; and inasmuch as all the abdominal organs are directly or indirectly connected with the reflex action of the spinal nerves, it was evident that the sensitiveness of the medulla spinalis was the result of a protracted gastric, intestinal, and uterine irritation.

After the application of some cups to the spine, I prescribed gr. ii Hydrarg. c. creta, to be taken every night, to be followed in the morning by a Seidlitz powder, and ordered also some warm pediluvia. Thereby the skin re-assumed soon its natural color, the bowels became regular, and the menses showed themselves, when the nervous disorder entirely vanished.

That amenorrhea is sometimes dependent on the presence of insufficient red corpuscles in the blood is admitted by everybody, and we have often seen such cases, in which the exhibitions of preparations of iron have proved entirely satisfactory. But the insufficiency of red globules in the blood, or anemia, is evinced by its peculiar physical signs, and when these signs of anemia are absent, and no such pathological condition exists, it is obvious that the administration of iron will prove not only negative, but sometimes even injurious. This metal has been, and is still, prescribed for weakness, almost on the same ground as the Chinese physician administers the powder of lion bone, namely, to impart to his debilitated patient some of the strength of the

king of the forest. Without dwelling on such an unscientific conception, we will only remark that anemia is only one of the causes of weakness, when iron is required, but that weakness is also often the result of an oppressed circulation, by plethora, or by poison; of deleterious matter retained in the blood by imperfect elimination; and sometimes, also, of a strong shock to the nervous system, or of various other organic derangements, when, of course, iron cannot be of any benefit.

Case 4th.—A young lady, eighteen years of age, of a strong and full constitution, and clearly plethoric, who had been laboring for some time under dysmenorrhea, became affected with chronic contractions of her fingers, which, whenever she got hold of anything, would snap, and let the object slip. She had also a dull pain in the head, and by examining her spine, I found it not only very red, but also sensitive at different places on pressure. Otherwise she said that her bowels were regular, and her urinary functions normal.

That her dysmenorrhea, or functional disorder of the uterus, and her nervous affection, were both connected with her plethoric state, was beyond any doubt, as such a condition will cause not only engorgements in the nerve-centres, but also in the other organs; and withal, the excess of fibrin in the blood of plethoric persons will directly oppose the periodical flow which constitutes menstruation. But a plethoric state is always originated in imperfect disintegration and elimination, whereby the balance between assimilation and disintegration is disturbed, and inasmuch as such a disturbance is not possible when sufficient oxygen is admitted to the blood, and the functions of the lungs, liver, kidneys, and skin, are properly performed, it logically follows that in plethora there is, besides an excess of blood, also an abnormal state of this fluid, by insufficient or imperfect elimination; which, of necessity, will pervert the different secretions and excretions, and thus become a source of various irritations, especially of the organs seated in the splanchnic cavity, although the bowels and the urinary passages might appear to be in a normal condition.

Consequently, after the administration of a good cathartic, an ample venesection was performed, and some cups were applied along the spine. One Pil. hydrarg. was then prescribed, to be taken every night at bedtime, to be fol-

lowed in the morning by a saline purgative. A solution of Pot. nit. with syrup was also ordered to be taken during the day, and plenty of active exercise in the open air recommended, in order to promote the activity of the lungs, and to keep the skin in a warm, soft, and moist condition. By this treatment the plethoric state gradually diminished, the uterine functions became normal, and the nervous disorder entirely disappeared.

Chorea may, as asserted by Dr. Andral, unquestionably be developed, or rather excited, by irritation, or by any strong mental impression; but in such cases there must be always some previous physical irritation which predisposes the nerve-centres to abnormal action, under the impulse, or by the vibration of any additional mental or physical shock. A plethoric state is, as we have already observed, a very common predisposing cause of this malady.

When chorea is connected with some incurable affection, or dependent on some lesion of the spine, or on some injury to the posterior part of the cranium, by which the free action of the cerebellum is hindered, or when some part of the cerebral matter is irritated, which cannot be remedied, a cure of the nervous affection cannot be expected. Such cases, however, though sometimes very inconvenient to the patient, are seldom of a serious character, and scarcely ever will prove fatal.

ARTICLE VI.

Experimental Medicine—Experimental Researches into the Subject of the Action of Phosphorus upon Living Tissues—Reflections upon the Pathogenesis of Fatty Transformations. By DR. L. RANVIER, Paris. Translated expressly for the Journal, by WALTER HAY, M. D., Chicago.

SECOND SERIES OF EXPERIMENTS.

Experiments 4, 5, and 6.—On the 15th of October I placed similar bits of phosphorus under the skin of the loins

of two other frogs; I killed one of them on the 23d and the other on the 28th. In neither of them were any inflammatory phenomena in the vicinity of the phosphorus. In the first there were observed yellowish plates and striae upon the surface and in the interior of the liver; at these points the hepatic cells were loaded with fatty granulations. In the second the liver was completely degenerated.

A sixth frog was poisoned by the very same process on the first of December, 1866, and exhibited to the Society on the 15th of the same month. It presented no inflammatory phenomena in the neighborhood of the foreign body, and the fatty transformation of the liver and kidneys was very complete.

In order to establish the value of these experiments, it was necessary to insert under the skin of different frogs fragments of inert substance, and to ascertain if they determined around themselves congestions, exudations, or neoplasma. This I accomplished in a sufficiently large number of animals, and ascertained that the presence of an inert foreign body, such as a little pebble or a fragment of thread placed in the lumbar region of the frogs, produced very speedily congestion, exudation, and even hyperplasia of the conjunctive tissue of the aponeurotic envelope, and of that which accompanies the cutaneous nerves, to such a degree that at the end of three or four days the foreign body is completely enveloped by a mass of new formation. Moreover, a variable quantity of serosity accumulated under the skin. None of these phenomena, as has been seen, are produced around a fragment of phosphorus.

Experiment 7.—On the 24th of September, 1866, I introduced, by means of a sub-cutaneous incision between the ears of a young rabbit, a fragment of phosphorus of seven millimetres in length, by two in width and thickness. Next I removed the os calcis of a new-born rabbit, and placed it in the right flank of the first rabbit. On the following days no inflammatory phenomena supervened on the side of the phosphorus, whilst at the point where I placed the os calcis I determined the presence of puffiness and tenderness upon pressure. Matters remained in this state until the 4th of October. At this date I killed the animal, and ascertained that the engrafted os calcis was surrounded by a thick, whitish deposit of two to three millimetres in extent, formed of embryonic cells. Sanguinous vessels ramified already in

this deposit, which later, as I have determined by other experiments, would have given origin to more perfect tissue. In the vicinity of the phosphorous nothing similar was recognized; moreover, the phosphorus had preserved its transparency, and its volume was not diminished by an appreciable quantity, whilst the connective tissue circumjacent did not appear to have undergone any modification; it was not hyperæmic, nor infiltrated by exudation. Examined with the microscope, it appears with its fundamental fibrillated substance. These cells, at some points, were more developed than is usual, but there was no very evident proliferation. The liver, the kidneys, the muscles, had not undergone fatty degeneration, which was probably due to the effect that the toxic substance had not been absorbed in sufficient quantity.

In order to give its entire value to this experiment, I should add that I introduced into the sub-cutaneous cellular tissue of different rabbits, inert foreign bodies, and constantly established, at the end of a few days, suppurative inflammations.

And if, in this experiment, I introduced under the skin of the animal on one side a fragment of phosphorus, and on the other a portion of living tissue, I did so in order to give the greatest possible value to the experiment, since an animal graft made with care rarely entails suppurative inflammation.

Experiment 8.—The 10th of December a fragment of phosphorus was placed under the scalp of a Guinea pig, the hair of the region having been carefully cut away.

On the following days no swelling was established, and pressure determined no pain. This condition of affairs existed up to the 24th of December; on that day the animal died accidentally. In the vicinity of the phosphorus there was neither hyperæmia nor exudation; however, the surrounding connective tissue had undergone a slight thickening, and it was determined by the microscope that the number of the cells was notably increased. The different organs presented no alteration.

In this case, in the vicinity of the phosphorus, slight evidences of irritation were observed, but they were very much less than those determined by the pressure of inert bodies.

In these different experiments, fragments of phosphorus and of other foreign matter were placed simultaneously in

the same animal, or in different animals of the same species. In none of these experiments did phosphorus, in its pure state, deposited in the midst of the tissues, and out of contact with the external air, determine around itself any such inflammatory phenomena as those produced by inert matters. Whilst a fragment of phosphorus introduced into living tissue represents, by its persistent angular form, and by its consistence a veritable foreign substance; it should, like it, determine inflammatory phenomena, if its action as a foreign substance were not counterbalanced by its specific action. This action, which removes from the cells, at least in part, the property of undergoing formative irritation, should therefore be considered as contra-stimulant. It can, therefore, to-day be no longer admitted that the fatty transformations which supervene in the liver, the kidneys, the muscles, etc., under the influence of phosphorus, are due to the irritant action of this substance. It becomes necessary to resort to other explanations.

There are met with in science three other theories: that of G. Lewin,* which consists in the admission that phosphorus introduced into the digestive canal suppresses entirely the absorption of fat by the chyliferous vessels. The veins would act vicariously for them, and the chyle would penetrate the vena porta, and be carried directly to the liver. The cells of this organ, brought into contact with a blood loaded with fat, would become infiltrated therewith. This theory rests upon exact facts.

Indeed, animals to whom phosphoretted oil has been administered, killed from three to four hours after the injection of the toxic substance, have their chyliferous vessels filled with a serous liquid, whilst the portal vein contains blood loaded with fine fatty granulations. It is possible even to administer to the animals ether with the phosphoretted oil without diminishing the transparency of the chyliferous vessels. This experiment, which I have reproduced many times, demonstrates that the phosphorus has a powerful action in preventing absorption by the lymphatics of the intestine; for, as M. Claude Bernard† has taught us, ether has the remarkable property of stimulating the absorption of fats by the chyliferous vessels.

* Lewin, *Etudes sur l'empoisonnement par le Phosphore*, Arch. de Virchow, 2d Serie, t. 1, 1861.

† Cl. Bernard, *Lecours sur les effets des matières toxiques et medicamentées*, 1857.

This theory of G. Lewin would be satisfactory if the phosphorus introduced into the digestive canal determined fatty transformations in the liver alone; it was formulated by its author at an epoch when it was not known that the fatty transformation involved a great number of organs, might be generalized for all the lymphatics the idea of Lewin concerning the action of phosphorus upon the lymphatics of the intestine, and maintain that if phosphorus determines fatty transformation in different organs, it is because the lymphatics, having for their function the resorption of the fat which they elaborated, physiologically, are impeded in this function. But, as will be perceived, this would be a substitution for the hypothesis of Lewin of another hypothesis, in support of which not one fact exists.

The second theory is that of Munk* and Leyden. These two authors having observed that different inorganic acids and certain substances, such as arsenic and antimony, as well as phosphorus, determine fatty transformations, (poly-organic) were impressed with the idea that these toxic statoses were the result of the destruction of the red globules of the blood.

In order to demonstrate the inaccuracy of their mode of observation, it suffices to poison frogs with phosphorus, and then, whilst they are still living, to study their circulation by the aid of the microscope. It can thus be established that the red globules which circulate in the capillaries of these animals have undergone no modification in their color or in their form. I have repeated this experiment several times, and it has always given me negative results. Moreover, with M. Demonchy we have determined that in frogs poisoned with Tartar emetic or arsenious acid, the blood had sustained no morphological alteration; and yet the liver and kidneys of these frogs were in a state of complete fatty transformation.

I have frequently examined the blood of rabbits and cats poisoned by phosphorus, and have never been able to distinguish any alteration of the red globules which could be attributed to the poisoning.

We now come to a third theory, consisting in the claim that phosphorus determines fatty transformations by reason

* Munk and Leyden. *Dir aerzte phosphovergiftung, etc.* (Ruckschnit auf. Path. u. Phys., 1865.

of a specific property. Upon the side of this prudent reservation M. Larcereaux* ranges himself.

In truth, in the present state of science it is difficult to explain the transformations which supervene upon poisoning by phosphorus; but what strikes our attention is this: that amongst toxic substances phosphorus is not the only one which determines fatty degenerescence. It should not, therefore, be claimed for it that it possesses a specific action, and hence one is induced, by the example of Munk and Leyden, to seek the relations between phosphoric steatoses and other fatty degenerescencies.

This brings me to the second part of this work: to the pathogenesis of fatty transformations, and especially to their relations with the inflammatory process.

We have seen Virchow maintain that inflammation can extend itself into the muscles and into different parenchymata by means of a fatty degenerescence of the histological elements.

In a final stage of neo-formations, inflammatory or otherwise, a fatty transformation of the cells supervenes habitually. Does it follow that this transformation appertains to a developmental movement which characterizes inflammation? Assuredly not. It is seen also in the numerous experiments of Virchow that fatty degenerescence is a process essentially passive. It is then incomprehensible how this illustrious professor can maintain that in certain cases inflammation, a phenomenon essentially active, could be characterized by fatty transformations.

Facts sufficiently numerous show, moreover, that inflammation and fatty degenerations, in place of being connected in an intimate manner, are, on the contrary, in opposition. In the phlegmon of sub-cutaneous cellular tissue, the adipose cells lose the fat which they contain, their nuclei and the little mass of protoplasm which surrounds them, originate by division to a very abundant production of cells, which fill up the old adipose vesicle. In acute osteitis the adipose medullary is seen to transform itself into embryonic medulla by an identical mechanism.† In acute or chronic arthritis, the cartilaginous cells, which physiologically contain fat, are deprived of it during the time whilst the cellu-

* Loc. cit.

† Des alterations des cartilages dans les tumeurs blanches. (Bull. de la Soc. Anatom., 1866.)

lar proliferation persists. This disappearance of the fat in the elements which contain it in a physiological state is met with not only in the inflammatory process, but also in all the active neo-formations. Then, when the neo-plasmata which constitute tumors take their point of departure in the cellular-adipose tissue, or in the medulla of bone, they determine the disappearance of the fat in the cells which they involve.

But a still more important fact: when under the influence of a pathological cause, the fatty transformation has invaded certain cells, it is seen that these cells can rid themselves of the fat which they contain under the influence of inflammation, if at any time it should supervene before the cellular elements may have been completely destroyed by degeneration, as results from investigations which I have made into the alterations of diarthrodial cartilages in white swellings.*

However, at the end of the inflammatory process, and in the last phase of every neo-formation, a fatty transformation of the elements, at that time superabundant, is observed. This transformation should not be attributed to an imitative process, but entirely to an alteration of nutrition, for it never supervenes at the moment when the cells are in full proliferation. It happens only at the time that the formative movement is arrested, and that the nutritive exchanges become difficult for the elements whose number is no longer in relation with the vascular development. On the first day of a catarrhal inflammation, the exudation is transparent, and the numerous cells which it contains show themselves with every indication of a very active multiplication, and do not contain a single fatty granulation. Later, when the exudation becomes yellowish and opaque, nearly all the cells enclose granulations, and even some little drops of fat.

It will be remembered that in the month of September frogs accumulate fat in their muscles. This fat is probably destined to nourish the animal during hibernation—it is known, indeed, that the frog has no sub-cutaneous adipose cellular tissue—it accumulates fat in the great epiploon and in the muscles. It was interesting to see whether an irritation directed to the fatty muscles of the frog could diminish or remove the fatty granulations—granulations arranged

* L. Rauvier, *Considération sur le développement du tissu osseux, etc.*, 1865.

like beads between the elementary fibrillæ. To determine this result, I passed threads through the muscular masses. I effected fractures, and established the fact that from the fifth to the eighth day the fatty granulations had considerably diminished with having completely disappeared in the portion submitted to the irritation. It is probable that this result would be more or less rapid, according to the season of the year, and according to the temperature. My experiments were conducted upon six frogs; four have had the femur fractured; three only were killed from the sixth to the eighth day. In the cases of two of those which had sustained fractures, I awaited the twentieth day, until there had been a commencement of a callus; in these, a limited number of muscular fibres were comprised in the cartilaginous mass, and had undergone complete fatty degeneration. In the last, which was examined twelve days after the experiment, the muscular bundles in the neighborhood of the thread, upon whose passage there had been an abundant cellular neo-formation, had commenced also to undergo fatty degeneration; in these last cases, the fatty transformation ought not to be interpreted by the inflammation, but very much rather to the hindrance sustained in the nutrition of the muscular fibres by the presence of tissues of neo-formation between these fasciculi.

I come now to the part the most disputed, and in fact the most difficult of fatty transformations. Whence comes the fat which infiltrates the histological elements? Is it already formed in the blood, which merely deposits it in the cells? Does it originate, as there is much evidence to show, from a direct transformation of the albuminoid substance which forms the protoplasma of the cells? Is its accumulation in the cells, the result of a deposit or of an exaggerated formation, or, indeed, is not the fat formed physiologically, consumed just in proportion as it is produced? Finally, it may even be asserted that the fatty matters contained in the cells are taken up, little by little, by absorption, and an impediment applied to this function would thence determine a fatty accumulation. It is not my intention to reply to these different questions which have been already disposed of partially, and very imperfectly resolved by Wagner, Mideldorf, Witich, Virchow, etc.; but I desire at present simply to adduce some new evidence. The microscope does not always suffice to detect fat contained in

organic liquids or histological elements. Thus in the blood no fatty granulations are recognized, whilst it contains fat in notable quantity. Fatty matters enter into the composition of the red globules in the proportion of 18 to 25 per cent.,* and yet no fatty granulations are to be distinguished in the globules.

These fatty matters, which can not be discovered by the microscope, as is very well established for the red globules of the blood—very probably because they are combined in an intimate manner with other constituent matters, can resume their form and characteristic reaction under certain conditions ; when the blood has escaped from the vessel, and remains in an accidental receptacle, it is observed that the red globules become decolorized, abandoning their haemato-sine, which is dissolved in the surrounding liquids or concretes in the form of granulations or crystals ; moreover, these globules become spherical, lose in the direction of their larger diameter, which falls to five ten thousandths of a millimetre ; then is perceived, forming themselves under a membrane which seems to envelop them, some fatty granulations disposed like a string of beads : these granulations are insoluble in acetic acid, and have all the optical characteristics of fat.

In this case I would say that the fat was masked in the globule, and that it had become apparent at the end of chemical transformations as yet badly defined. I will not maintain, with Försher, that a protein substance is transformed into fat.

This theory of fat masked can explain many facts ; it is in relation with certain very interesting phenomena which occur in the bodies of foeti which, after having died, have remained from one to three weeks in the uterus.

During the past year I have been able to collect five of these foeti, which I have studied carefully.

In regard to the question which occupies us now, they presented identical modifications, which will obviate the necessity of making special observations upon each one of them.

The blood contained fatty granulations ; in four of them the red globules were entirely destroyed ; in the fifth a few were recognizable. In the nerve tubes the myelene was fragmentary, and one would have said that the nerves had

* Pelonze et Fremy, *Traité de Chimie générale*, tome VI., 2d edition, p. 100.

degenerated after section. In the nervous centres nothing more was found than a semi-fluid mass of fatty granulations, crystals of fat, and cholesterine. The nervous cells alone were intact, and contained no fatty granulations. The liver contained great quantities of fat, and the hepatic cells were destroyed : the epithelial cells of the renal tubuli contained very distinct fatty granulations. The cartilaginous cells of the ossific layer, which in the physiological state contain no fat, apparently, at this period of life, contained from one to five fatty granulations. The primitive fasciculi of the muscles of the trunk and of the limbs, the fundamental substance of the cartilages, the cells of the connective tissue, the fundamental substance of this tissue, contained in no case fatty granulations. On the other hand, the muscular fasciculi of the heart were all loaded with it.

From these facts it must be concluded that albuminoid substances do not give origin to the formation of fat when they are abandoned to themselves—that is to say, when they are deprived of life—for if it were not so, it would be impossible to comprehend how the substance of the muscles of the limbs, placed under the same conditions as the muscles of the heart, does not give origin to the formation of fat, whilst in these last, fatty granulations appear. Moreover, the formation of fatty granulations in the cases which we are now discussing, is limited actually for each histological element. Some few granulations only show themselves in the cells of the cartilages ; they are a little more abundant in the cells of the kidney ; they are out of all proportion in the liver ; and, finally, in the nervous system, they seem to originate directly from the medullary matter ; for the fibres of Remak, so abundant in the foetus, contain here no fatty granulations. I perceive but one mode of explaining these different facts : it is by the assumption that the fatty matters combined more or less feebly with the albuminoid matters are more or less abundant according to the different histological elements. These fatty matters are masked in the different tissues whilst living, and disengage themselves, little by little, after death. It is easy to perceive how interesting would be the results of chemical investigations made in this discretion, but I am not yet in a position to give positive results upon this subject. We have, however, only an hypothesis based upon certain facts, and which I hope to demonstrate completely in another work.

It is now apparent why certain elements involved in necrosis might give origin to fatty granulations, without necessitating the intervention of a direct transformation of albuminoid matters into fat. But these fatty granulations would be in this case, limited in number; as in the conditions in which much fat originates in the cells. It is necessary, therefore, to seek the aid of a deposit more considerable, a greater elaboration, in default of assimilation or absorption.

If we recur now to the interpretation of fatty transformations in poisoning by phosphorus, resting upon the experiments contained in this memoir, experiments which demonstrate that phosphorus impedes nutrition and the multiplication of cellular elements, to such a degree that the phenomena of inflammation can no more develop themselves, we will understand how these elements can no longer elaborate the fat which they contain in a masked condition, or that which is brought to them by the vascular system.

What corroborates greatly this view of the matter, is that in poisoning by phosphorus, the first organs involved in the fatty degeneration are the liver, the kidneys, and the heart, organs in which fat is recognized in the foetus which has remained dead for some weeks in the cavity of the womb.

CONCLUSIONS.

The protoplasm of the cells appears to be the seat of the exchanges, and of the elaboration of the material carried by the blood; it is likewise in the protoplasm that the fat is first deposited.

The presence of fat in a cell which contains none of it apparent, in a normal state originates from the fact that the nutritive process in the cell is retarded. If this movement is stimulated by irritation, the fat disappears.

Since certain cells manifest great activity in the elaboration of fat, it does not result from this that they form it at the expense of available substances which traverse them; for the blood contains fat in a masked condition—that is to say, in a state of combination or of saponification. The adipose cells, those of the liver, for example, appear to reduce the combined fat to a neutral or insoluble condition.

In the case of the foetus, dead, and remaining for some time in this condition in the uterine cavity, the masked fat

becomes apparent to the microscope in the liver, the kidneys, the heart, and the cartilage cells.

Phosphorus determines fatty transformations because it diminishes the nutrition of the histological elements, because it is a contra-stimulant to these elements, a property demonstrated by the experiments detailed in this manner.*

ARTICLE VII.

On the Import of Symptoms. By SAMUEL HENRY DICKSON, M. D., LL.D., Prof., etc., Jefferson Medical College, Philadelphia.

The relation of morbid phenomena to each other, and to the special forms of disease in which they manifest themselves, has always appeared to me to be a subject of deep interest, deserving the closest and most earnest inquiry. Pathologists are bound to seek with unwearied diligence and perseverance the cause and the history of every such change in the vital actions and conditions. The ultimate value of such knowledge cannot be over-estimated; but as yet, and in so far as our attainments have reached, we have been, in a degree at least, disappointed of the expected results.

In the Duke of Argyle's admirable work on "The Reign of Law," we are warned of the narrow limit set to our capacity, and reminded that the kinds of explanation which we are aiming to arrive at, are different in character and set apart. "That which is made plain to one faculty is not necessarily made plain to another. That which is a com-

*Since this memoir was drawn up, there has appeared in the Archives de Virchow, a memoir by Dr. Bernhardt upon the alterations of the stomach in poisoning by phosphorus.—This author quotes nearly all the observations published in France and Germany, in which the state of the digestive organs of those poisoned fatally by phosphorus had been noted. He adds to it some personal observations, and arrives at this conclusion: that phosphorus does not ordinarily determine inflammation of the gastric mucous membrane.

When this inflammation occurs, it must be attributed to the presence of gas in the stomach at the moment of the ingestion of the phosphorus. This body would then be oxidized, and would occasion the production of phosphorus and phosphoric acids, which alone could act as caustics.

plete answer to the question *What*, or to the question *How*, is no answer to the question *Why*. There are some philosophers who tell us that this last is a question which had better never be asked, because it is one to which nature gives no reply. If this be so," he remarks, "it is strange that nature should have given us the faculties which impel us to ask the question—ay, and to ask it more eagerly than any other. It is indeed true that there is a point beyond which we need not ask it, because the answer is inaccessible. But this is equally true of the questions *What* and *How*."

The inference to be drawn from these well-considered reflections is clearly that we must never cease to inquire, to ask, to explore. Only by the most persistent effort can we ascertain, if even thus, that we have reached the limits of the knowable in any direction. The philosophical physician, guided by these views, will refuse to regard diseases as mere "bundles of symptoms;" he will not be content to recognize merely their coincident presence; he will strive to detect the bond of connection which unites them, and to comprehend how and why they produce and depend on one another. He will be anxious to know both their relative and absolute value. He observes that a particular mode of suffering, headache, for example, is associated generally with fever; he finds it often connected with a local hyperæmia, congestive or inflammatory; but he soon discovers that this connection is not constant, and thus he is led to ask why it should occur in the individual case before him; or, reversing the problem, why it should not occur uniformly under contingencies apparently the same or similar.

Knowledge, such as is here implied, will not surely be long barren, but, when we acquire it, must abound with rich fruits. Symptoms will then be ever pregnant with meaning. They will teach us not only the existence and degree of intensity of morbid conditions, but will suggest to us their hidden nature and origin; and this apprehension of causes will not fail to lead us to the therapeutical arrest of consequences and effects.

At the present day, it must be confessed, we are sadly deficient in this department of our science. We deal habitually with symptoms as mere entities, sometimes associated, sometimes absolutely isolated. Of their roots we often know nothing, and are too apt to be content to know nothing. We appreciate them individually as we see them asso-

ciated or concurrent with other symptoms, and then arrange them as parts of or belonging to certain diseases; but so loosely that we scarcely miss them when they do not attend, nor do we even allow their absence to suggest a question as to the character of the cases. We occasionally make an endeavor to separate and distinguish them as incidental or characteristic, uniform or uncertain, prognostic and diagnostic. But we decline to investigate, or we neglect to overlook their real significance, their relevancy, so to speak, to the underlying changes, the *causes* of which they are the out-cropping, superficial effects.

"Time is lost," says Theophilus Thompson, "in the laborious accumulation of miscellaneous facts. Numerism is productive in proportion to the intellectual intuition applied in the selection and appreciation of facts. There is an aristocracy of facts as well as of races, and the mind should be taught to discern their prerogative dignity. He who cannot or will not see that one fact is often worth a thousand as including them all within itself, and that it first makes all the other facts; who has not the head to comprehend, the soul to reverence a central observation or experiment, what the Greeks would have called a proto-phenomenon, will never receive an auspicious response from the oracle of nature."

And Latham, following the same track of thought, argues, "There is nothing that we call symptom in disease which does not contain within itself much more than a mere sign; as dawn, a sign of the rising sun, is the effects of his beams; cloud above us, a sign of rain, is an actual gathering of the waters. Symptoms flow out of disease, being signs of something behind and beyond."

From our ignorance or carelessness in this matter arise obvious difficulties in our nosology and methods of classification; hence also modes of treating of disease absolutely paradoxical, as when we speak of fever without heat of skin, of small-pox without exanthem, and of cholera without discharges or spasm. We thus loosely acknowledge that we have not settled upon any indispensable symptom which shall be taken as the true, unfailing, and exclusive manifestation of the definite pathological condition. We regard an individual subject as an epileptic, because he *has had* convulsions; and we expect, though we cannot tell why diagnostically, that he will be again attacked. If he is not, we can no more explain his escape than his previous seizure.

In the Typhic group of fevers we recognize two, perhaps three varieties of "types," which we separate clearly enough. Each of these is marked by a characteristic eruption on which no little stress is laid. In true typhus, there are maculæ, dark and fixed, probably a deposit of pigment in the skin. In typhoid, a rose-colored erythema shows itself in defined circular spots, transient and in successive crops, a mere passing and local hyperaemia of small dermal vessels. In spotted fever, obscurely and capriciously combined (but what is *not* obscure in *its* history?) with a frequent, yet not uniform, cerebro-spinal meningitis, we have cuticular stains, blotches, petechiæ, and ecchymoses more or less diffused, varying in character, some of them slight erythema, some apparently pigmentary, and some truly haemorrhagic.

Now, whatever else may be said of these cutaneous phenomena, whatever importance may be attached to them as prognostic or diagnostic, nothing even plausible enough to invite discussion has been offered in explanation of their presence—no reason given for their occurrence, no suggestion of the nature of their connection with the other symptoms with which they are concurrent or coincident, nor any conjecture of their meaning or purport.

Some have ventured to hint that they are exanthematous; but in the true exanthemata the cutaneous eruption is not only uniform and diagnostic, but it is somehow essential; it cannot be dispensed with; it must take place in a regular and consistent way; must go through its successive stages; if it be interfered with in its established progress, if it subside unduly, disappear, abort abruptly, "strike in," as the phrase is, the most serious consequences, as is well known, will follow, full of risk and evil.

But in the fevers of which we speak, the affection of the surface plays a very small and unimportant part. Spotted fever may exist with few or no spots; the patient dying with or without tetanus, with or without blood-stains, with or without meningitis. Typhus may always present its peculiar maculæ, but they are little considered either as diagnostic or prognostic; they can not be seen in the negro, and indeed we do not care much to look for them, as their quantity indicates nothing which it is of consequence to us to know.

A very different view, however, is taken by many modern writers, of the eruption in typhoid fever. Aitken says:

"The successive daily eruption of a few small, very slightly elevated, rose-colored spots, disappearing on pressure, each spot continuing visible for three or four days only, is peculiar to and absolutely diagnostic of typhoid fever." To make this dogma more emphatic, it is printed all in capitals. It is followed, however, by the statement that "the eruption is often so scanty that the physician may justly hesitate for a day or two to make a diagnosis;" and on the next page we find a conditional phrase which entirely destroys the force of his definition. "The eruption already described, and sudamina, are *nearly constant* in children after five years of age. "In children between one and five years of age the phenomena do not seem to be so easily observed as in adults." A symptom just stated to be "absolutely diagnostic," one "which clinches the diagnosis," is *nearly*, that is, not altogether, "*constant* in children after five years of age," and "*not so easily observed in infants*:" it is difficult to perceive why not; their skin is clear and delicate.

It is so hard to prove a negative that I will not contend for the possibility of a typhoid fever independent of the *tâche rouges*. But they are "often scanty," perhaps "not constant," undiscoverable in the negro, in whom we must diagnosticate the case without them. Sutton, in a good history of Epidemic of Typhoid in Kentucky, declares them to have been generally wanting; no one has drawn any inferences prognostically from their absence or presence, abundance or sparseness. All that we know about them is that if from the sixth to the ninth day of a typhic fever, we find them on the body, we feel justified in giving name to an attack concerning which we may have previously doubted; we conclude further that diarrhoea impends, and meteorism, and bulging and ulceration of Peyer's patches, with risk of destruction of the patient by perforation through the coats of the intestine and the peritoneal serous tissue. But these are to us facts of simple coincidence; coming to us empirically by tradition and recorded experience. We have no guess at their connection with or relation to each other, nor at any condition serving as common cause to them all.

In the varied modes of death in these, and indeed in all fevers, widely considered, we are annoyed with further illustrations of the same profound ignorance. Our prognosis may be sagacious enough and generally correct; we may foretell the death, but too often we know not how or why

it ensues. If it occurs early, we seldom find any thing to explain its necessity. We talk of congestion, and of toxæmia; but we know not why in certain cases the familiar congestion, so usually transient, should persist fatally. Nor have we detected the blood-poisons, though sought for with the highest powers of the microscope and the most delicate chemical analysis. Of consequence we know literally nothing of the relation of the symptoms with the ultimate catastrophe.

When a death occurs from protracted fever, the usual lesions found are inflammatory or quasi-inflammatory. Does this prove the identity of fevers with the phlegmasia? Even if this were so, the nature and extent of such inflammatory lesions do not explain the death. Mere ulceration of the patches of Peyer heals in the majority of cases; it is only when it perforates into the peritoneum or a large vessel that we understand the result to have been of necessity fatal, as from hemorrhage in the latter case, in the former from nervous shock, perturbation, and prostration, for the patient dies far too promptly to allow any other explanation. In typhus the local lesions, it is conceded, do not account for the death.

We ask in vain why the black vomit of yellow fever is so terrible a portent of evil. If it be a haemorrhage, as is so generally believed, surely the amount of blood lost in the majority of cases is not sufficient to destroy the subject. If it be a morbid secretion or excretion, its specific cause and mode of origin are most obscurely hidden, and the energy of that cause strangely capricious, for the result does not in any degree depend upon the quantity poured out, some patients recovering after profuse ejections of this sort, others dying with little or none. And what means the deep orange hue of the skin and eyes, met with so frequently as to give name to the disease, and yet not seldom wanting or scarcely observable either in the moribund or the convalescent? The characteristic fatty liver too, the *café au lait* or box wood atrophy, so rapidly developed, whence does it arise; what is its relevancy to the other conditions? Riddell tells us that a similar or analogous fatty degeneracy of the heart is even more uniformly present; if so, it is hard to say what is its origin or tendency, or how it appears in this combination.

But in truth, as we know little of the nature of life, we understand little or nothing of its extinction. Professor

Casper, of Berlin, a thorough expert in the autopsies of his Professorship of Medical Jurisprudence, tells us that "cases very frequently occur in which the most careful examination of the body can discern no material alteration that has any reference to the cause of the death of the individual. Cases of this kind can, as I have often seen, terribly perplex the inexperienced. Nothing abnormal in the surface of the body, nothing in the cranial cavity, nothing in the thorax, nothing in the abdomen. Of what did the deceased die?" (For. Med., vol. i, p. 56.) Elsewhere he says, (p. 59,) "In neuroparalytic death, not only is the mechanism of the body in no way altered, but there is also no perceptible change in its fluids or solids. It is of frequent occurrence," etc. We must accept unequivocally the conclusion he arrives at ; that "the cause of death cannot with certainty be determined ; this decision is in itself perfectly indisputable."

We boast, and with some justice, of the hygienic progress of civilization to which our profession has so largely contributed. Knowledge of causation is valuable as suggestive of prevention ; but it is humiliating to reflect how little we know of, or knowing, how little we can do to counteract the causes of our endemics and our epidemics, more or less pestilential. Nay, with regard to attacks of pestilence continually occurring among us, sporadic or individual, how total our blindness! It is but the other day that two deaths occurred in this city, under circumstances deeply impressive, from what we call indifferently spotted fever or cerebro-spinal meningitis. Two young men, members of the medical class of one of our colleges, having reached the termination of the session in good health, one of them having passed honorably through his examinations, and waiting for his degree, both of them of good standing and well esteemed, of temperate and regular habits, residing not in the same house, but in the same street, three squares apart, following the same pursuits, but in no way associated together, were, within a few hours of each other, after no special exposure of any kind in either instance, under no discoverable excitement or annoyance—no ascertainable change or alteration of conditions—no undue or unaccustomed contingency—attacked suddenly, harshly, violently, and fatally. One of them lingered from Monday night, when he had a chill, until Thursday forenoon ; the other sank within forty-eight hours from the moment of seizure. Both of them were fine specimens of youthful vigor; the second especially, was tall,

manly, robust, strong, and active. The first was what is designated as a tetanoid case, yet not without abundant spots on the surface; the second was covered with purpous blotches and ecchymoses, but did not suffer from spasm. There was no autopsy obtained. Now and then, for months past, the bills of mortality of the city would contain the notice of a death from this terrible disease, but for two weeks previous there had been no such record. The street is pleasant and well kept, the neighborhood healthy, both houses in good hygienic state, neat and clean, and the numerous residents in both of them free from every form of sickness or complaint.

In vain we endeavor to detect the source and nature of a poison so insidious, so rapid, so deadly; in vain we ask what determined its assault upon these two apparently firm and choice constitutions, or what lurking predispositions to special evil could be masked under such deceptive tokens of perfect health! Alas! of how little avail, how little instructive import, how little prophylactic importance, are the contingencies we are accustomed to dilate upon as of such high value in our disquisitions concerning hygiene, when we find that, under the most favorable circumstances of civilized and refined life, an obscure pestilence of the most incalculable and irresistible intensity can thus be generated among us, and select its victims by affinities which seem to contradict and run directly counter to all rational and pre-conceived anticipations.

Much stress has of late been laid upon the disappearance of the chlorides from the urine during the progress of pneumonia, and their return when convalescence is established. We are not clearly informed why nor where they are detained. They have not been detected in the inflamed parts, where Williams says they are arrested; nor is it known that they disappear from the renal secretion in any other of the phlegmasiae. It is not shewn that they come away with the sputa, where there is expectoration, nor what becomes of them in cases, occasionally met with, where there is none. Their restoration seems to attend or follow recovery of health, but whether to predict, nor denote, nor conduce to it in any sense.

The same may be said of the herpetic eruption which, occurring about the mouth, Todd regards as of favorable import in pneumonia, and which some physicians and all nurses

look upon as pleasantly prognostic in fevers generally; no one has even conjectured how or why.

A special form of disease is now recognized as "Addison's, or bronzed skin," of which the melanistic or darkened color of the surface is considered to be the *sign*, whether effect or not, of a peculiar degeneration of the renal capsules. But many authorities, Virehow, himself a host, among them, deny the uniformity of the connection, and affirm that cases of varied degeneracy are met without the bronzing, and cases of bronzing where the capsules are found quite healthy.

Convulsion stands prominent as one of the most appalling of morbid phenomena. The hideous disfigurement of the "human face divine," the rapid contortion of the features and the grotesque grimaces, the rolling eye, the frequent strabismus, the gaping and shutting jaws, the protruded and wounded tongue, the bloody foam on the turgid lips, the twisted neck, the empurpled visage, the frame agitated with muscular contractions, clenching of the fists, bending and extension of the limbs, constitute a picture from which we shrink instinctively with pity and dismay. But what is the import, the meaning of this terrible display? I have gone through the painful details that I may impress on my reader's mind our total want of comprehension of the entire pathology of the case. It is not needed that I should remind him that these symptoms attend upon a prodigious variety of conditions of body and mind, and are not essentially dependent on, or connected with any one. "Epilepsy, as is well known," says Nannias, (Bouchardat, Annuaire, 1868, p. 196) "has sometimes its source in incurable material lesions. But it may happen that these lesions shall persist, and the fits disappear, so that we are forced to admit the intervention of another unknown element, upon which depends the appearance or disappearance of the epilepsy." Brown Sequard had indeed anticipated this view when he formed the abstract ontological idea of epilepsy, which, being present, his guinea pigs might be excited into a fit, but when it went away, were no longer excitable.

In our crude "bills of mortality" there is always found high up on the list, as far as numbers are concerned, the category of "convulsions." Now, nothing can be clearer than that this use of the term is a deplorable mistake—a grievous fault in our nomenclature, and one that should be corrected without delay. Convulsion is not, in any sense, a

disease; it is a mere symptom, which occurs more or less frequently in the progress of every known form of disease. It is not uniformly associated with any, if we except puerperal eclampsia. It must not be confounded with spasm-tonic, or persistent contraction of contractile tissue—which constitutes, as we believe, the very essence of many diseases. Spasm is a frequent cause of death, but never appears by name on our bills of mortality. Convulsion cannot properly be said to cause death in any case, yet occupies a large space in them. Several forms of convulsion are physiological, and functionally available for useful purposes, as coughing, sneezing, vomiting. Spasm is invariably morbid and injurious. Convulsion is rarely, if ever, attended with pain, unless by undue protraction or peculiar violence; nay, it is sometimes pleasurable, as in laughing, and intensely so in venery. Spasm is always painful—the slightest cramp of a muscular fibre is hard to bear.

Convulsions often usher in attacks of disease, as of the exanthemata, pneumonia, etc., in children; the familiar chill of fever in adults as well is a mode of convulsion. They follow a fright, violent emotion, sudden shock; the irritation of worms in the intestines, of teeth in the gum, of sesamoid bones in the toe, may produce them, or a bit of glass imbedded in a nerve, a cut across the spinal cord, as in Brown Sequard's guinea pigs, or a tumor in the brain, the vertebral column, the liver. Sympathy and imitation alone will capriciously excite them; and, if we reason with Todd, they "eliminate by salutary explosion" certain poisons from the blood in some inconceivable way, as in cases of uræmia. I might go on to enumerate indefinitely additional occasions of their occurrence, as in the hysterick and pregnant woman, nervous, emotional, and meameeric disturbances, but these shall suffice.

Let us demand, then, and most earnestly contend for the rejection of this heading from all municipal and general obituary records. I maintain that convulsion is not only not a disease, but it is not an essential portion of any disease, with the single and not perfectly clear exception above allowed, either characteristically or diagnostically. If the assertion of such essentiality be plausible in any instance, it would surely be so in epilepsy. But epilepsy is familiarly and by common consent divisible and divided under two heads, the characteristic condition underlying both of them equally and alike. One of them, known, I regret to say, by

no English designation, but spoken of in French phrase as "le petit mal," exhibits no muscular agitation whatever. A lady riding does not fall from her saddle nor lose her bridle rein when attacked. Momentary vertigo, "vertige épileptique," a brief instant of mental inanity, vacuity, loss of consciousness, suspension of volition, of thought, this is all; there is nothing more recognizable either objectively or subjectively. Between the paroxysms, whether thus simply vertiginous or truly convulsive, we cannot consider the subject—how reasonably imagined in ancient times to be under demoniac possession!—we cannot regard him as free from disease. Yet what shall we say of its nature, its specific character, except that it is absolutely unknown? We have not detected the relation which it holds to any one among the numerous conditions with which we find convolution to be familiarly associated.

There is another complicated question rapidly coming to press upon us as we acquire valuable accessions of knowledge from the kindred sciences. The microscope shows us every day new objects of investigation, entities, animal and vegetable, developed in diseased tissues, and in morbid secretions and excretions. Of some of these we know nothing except in this connection, we find them nowhere but in sick bodies. Others are found outside of the organism, into which they intrude themselves, and are detected by the mischief with which their presence is attended.

It is not always clear whether their development and growth are to be looked on as causative of the contingencies in which they make their appearance, or rather the effect or product of those contingencies, or perhaps, in fact, as mere coincidences, like certain other phenomena, to which reference is made above. Parisites attached to the living body, both entozoa and ectozoa, have been maintained to be altogether indifferent, innoxious, entirely consistent with good health; nay, Rush contended that worms in the human intestines played a useful part as scavengers. The various "grubs," as Wilson calls them, his entoza folliculorum and acari, and the several pediculi, whatever annoyance they may occasion, do not usually disturb the general system in any material degree. Nay, the trachina spiralis itself, recently noted so gloomily in our medical records, is now and then met with, as I have seen it, in the healthy muscles of a body accidentally killed, and displayed in our dissecton rooms.

But there are unnumbered tribes of vegetable and ani-

molecular beings detected in the fluids and upon the tissues, which are alleged to be specific by histologists, and must at least be considered characteristic. Their absolute exclusiveness of appropriation is not yet made out satisfactorily. M. Simon is said to have "announced at a late meeting of the Pathological Society of London, for Dr. Hallier, of Jena, that he had, in the course of recent and very extensive investigations, discovered characteristic fungi in variola, variola ovinia, vaccinia, and in the blood in typhus, typhoid, and measles." Professor Salisbury ascribes intermittent fever to a palmette, and measles to an alga, and has detected characteristic fungi in syphilis and gonorrhœa. An ingenious paper from his hand in a late (April, 1868,) number of the American Journal of Medical Sciences, gives us the history and portraits of a penicillium, some toruli, several zymotoses, a botrytus, and a crypta, fungous parasites, and of animalcules, a ciliaris, a trichina, and sarcina, and a trichomonas, all from the genito-urinary organs. The oidion and the leptothrix infesting the pseudo-plasm of diphtheria, the algae in muguet, in favus and porrigo—and I might adduce scores of other examples—have been subjects of dispute as to their relation to the morbidities always observed where they have been detected. Even in the halitus of pertussis, Poulet has found "a world of minute infusoria which were in all cases identical," the most numerous being bacteria, and a monas.

Still more obscure, if deeper obscurity be possible, are the relations of such morbid formation as tubercle and the cancer cell to the organisms which they seem to inquinate.—Vogel speaks of them as "individual," or rather "semi-individual," and there can be little doubt that they possess the property not only of taking root in a healthy part or tissue, and growing there, but besides and beyond this, they originate in that system, previously sound, a series of perverted actions which result in the formation and deposition of similar injurious pseudo-plasma, malignant cells and tumors in other parts.

Here then a wide field of controversy, doubt, and conjecture is opened to us. What is the true and available import of these discovered facts? Parasitic and quasi-parasitic diseases are communicable, and seem to be conveyed by means of the transfer of the palpable parasite, whether animal or vegetable, which migrates either spontaneously or with our help, and may be ingrafted. Such certainly is the fact with

many or most of them, but we cannot venture, in the present state of knowledge, to affirm that it is true of all. With one remarkable exception, and some others imperfectly known and little considered, the diseases enumerated as of parasitic character and combination are among the contagious. But we are hardly prepared to say that the parasite is the materies morbi, the element of contagion, which is assumed indeed to be a poison or malignant force that in no distinct case we have ever detected as yet and separated. It will be very difficult to prove it to be the *fons et origo mali*; nay, in many instances it seems greatly more probable that we find it where it is, because the morbid surroundings afford it an appropriate nidus and pabulum.

The exception above alluded to is worthy of especial consideration. If the observations of Professor Salisbury upon intermittent fever be established as correct and well founded, we have a familiar malady parasitic but certainly not contagious; no one imagines the possibility of communication of malarial ague from a sick to a healthy man.

Yet it is not easy to conceive the existence of a parasitic alga or fungus, which shall bid defiance by its tenacity of life to so many perpetually recurring changes within the animal body for such indefinite periods of time, through so many alterations of season and climate, shall be capable of most abundant reproduction or multiplication within the organism, and such ready elimination with the several excretions, and still when passing out or ejected in notable amount, shall be totally incapable of finding its way into and impressing other animal bodies in its neighborhood.

And again, if these minute existences are not, all of them, like the palmella, intruders from without, how do they originate? Is Virchow right in his cell-pathology, maintaining that they are natural elements, cells of course, somewhat altered and modified merely by circumstances; or, as Paget and common sense teach us, new productions, altogether different from healthy material, and of essentially perverted and evil character? But if we press this inquiry we shall scarcely be able to refrain from intrenching upon the great biological controversy, now so hotly carried on by Pasteur and Donnè, and so many other renowned microscopists and histologists, concerning the mysteries of a disputed heterogenesis or "spontaneous" or "equivocal generation," in which, reluctant to engage, I decline to involve myself; and, therefore, close here somewhat abruptly this imperfect essay.

EDITORIAL AND MISCELLANEOUS.**MEDICAL COLLEGES.**

Medical Colleges throughout the country seem to be active in their efforts to make more perfect their system of instruction. That which seems to impress all as most practically useful to students, is the amount and variety of clinical material. Institutions which, in the days of our pupilage, afforded literally nothing of the kind, now make "Clinical Medicine" an important item in the curriculum of study, and have daily instruction given in this department.

An increase in the number of Chairs beyond that of Clinical Medicine, and the extension of the term to six months, are being attempted by some Colleges, but few, we predict, will find students willing to remain during the protracted course, or able to digest the increased number of lectures in an ordinary term.

While we think that the system of instruction pursued by most Colleges is sadly deficient in many respects, and should be modified, and that the standard of qualification for the Degree is deplorably low, it is not very likely that the changes proposed in the mode of teaching will insure more thorough preparation of the student. That, and that alone, which will insure more rigid exactions in the green-room, will insure qualification.

When all are determined to effect this great subject, losing sight of all selfish considerations, "the way is easy." In 1866, our views on this subject were fully stated; and while we have no desire to press them, our opinion is not at all changed by the various propositions proposed for reform.

We are in receipt of announcement for the next course of lectures from the following Colleges:

University of Virginia—Medical Department.—In this Institution the course will open in October and continue nine months. The Medical Faculty admit students to exam-

ination for the Degree at the termination of one course. The Faculty consists of *five Professors*. Fees for the Course of Lectures, or Professor's tickets, \$110.

Bellevue Hospital College, New York.—The regular Winter Course opens about the middle of October, and continues *four and a half months*—has *twelve Professors*. Fees for the course of lectures, \$140. Graduates of last session, 111.

Humbolt Medical College, St. Louis, has a course of *seven months*, commencing the middle of September—has *eleven Professors*. Fees for the course of lectures, \$105. Graduates last term, 4.

University of Michigan, Ann Arbor.—This Institution holds a session of *six months*, commencing the first of October—has *four Professors*, whose fees for the course is about \$35.

Jefferson Medical College, Philadelphia, holds a course of *four and a half months*, with *seven Professors*. Fees for the course of lectures, \$140. Graduates last term numbered 159, the largest of any school from which we have heard.

Washington University, Medical Department, Baltimore, Md., opens the course of *four and three-fourths months* on the first of October, with *ten Professors*. Fees for the course of lectures, \$120. Number of graduates last session, 55.

Long Island College Hospital, Brooklyn, N. Y., commenced its regular Summer Course of *four months* on the first of March, with *nine Professors*. Fees for the course of lectures, \$140. Number of graduates last term, 33.

Willamette University, Medical Department, Salem, Oregon, commences the course of *four months* on the fourth day of November—has *nine Professors*, with fees amounting to \$110. At last term, graduated nine students.

Miami Medical College, Cincinnati, Ohio, opens on the first of October a course of *five months*, with *nine Professors*. Fees for the course of lectures, \$60. Graduates at the last term, 30.

University of Pennsylvania, Philadelphia, commences its term of *four and a half months* in October, with a corps of *seven Professors*. Fees for the course of lectures, \$140. Graduates at last term, 155.

Albany Medical College, Albany, N. Y.—This Institution opens on the first Tuesday in September, and continues *four months*, with *eight Professors*.

University of Louisiana, New Orleans, opens on the 16th of November, and continues *four months*, with *seven Professors*. Fees for the course of lectures, \$140.

University of Maryland, Baltimore, Md., opens its course of *four and a half months* on the 15th of October, with *seven Professors*. Fees for the course of lectures, \$105.

Toland Medical College, San Francisco, Cal., commences the regular course of *four months* in July, with *eight Professors*. Fees for the course of lectures, \$130.

The Medical College of Virginia, Richmond, Va., opens the regular course on the first of October, and continues *five months*, with *nine Professors*. Fees for the course of lectures, \$120.

Atlanta Medical College, Atlanta, Ga., opens, on the first of May, the regular course of *four months*, with *eight Professors*. Fees for the course of lectures, \$120.

University of Louisville, Medical Department, Louisville, Ky.—This Institution opens on the first of October, and continues its course *five months*, with *seven Professors* and several Assistants. Graduates, 24. Fees for the course of lectures, \$40.

From the above, it will be seen that a large majority of the Colleges, whose announcement for the present year we have on file, have not found it practicable to make any considerable change in the number of Professors or length of the course. From the announcement for 1867 of six other Colleges, whose catalogues for the present year have failed to reach us up to this time, we see that five-sixths of them, at their last course, adhered to about the usual term and number of Professors. So that out of twenty-three Colleges, so far as we are informed, seventeen have from seven to nine Professors, and the term of lectures four to *four and a half months*. Of the six that have varied considerably from

what has been usual, two have less than six Professors each, as will be seen in the above systematic notice of the different Colleges.

Highly as we appreciate all efforts to raise the standard of qualification for the Degree of Doctor of Medicine, and to improve the system of medical instruction, the plan proposed—that of increasing the number of Professors to ten or twelve and lengthening the term to six months—does not strike us as likely to be successful, nor, by any means, universally practicable, at this time.

By all means, lectures should be given upon all the subjects connected with medical science, and continued to the extent found useful; but more than this proves a source of embarrassment to both teacher and pupil. If two courses of lectures are not sufficient to prepare the student for examination—sufficiently close to protect the profession against the odium of having ignorant members—let the applicant be sent from the green-room to a third course, should he ask for it prematurely. Had the energies of the profession—particularly of those holding the positions of teacher and journalist—been so actively directed toward the discovery of some means of insuring rigid exactions in examination for the Degree, as in arranging plans for cramming pupils without their consent, the object would have been attained long since.

Account of the Four-Legged Child, J. MYRTLE CORBAN.

NASHVILLE, TENN., June 16, 1868.

The undersigned, in response to the request of a number of physicians and the relatives and friends of the unfortunate subject of this investigation, give the following testimony: The infant, J Myrtle Corban, has four legs and two distinct female organs of generation, with two external openings of the double rectum. The external genito-urinary organs are as distinct as if they belonged to two separate human beings. The faeces and urine are passed (most generally simultaneously, particularly the urine,) from both external urinary and intestinal openings, situated respectively between the left and right pairs of legs.

The head and trunk are those of a living, well-developed, healthy, active infant of about five weeks, whilst the lower portion of the body is divided into the members of two dis-

tinct individuals, near the junction of the spinal column with the *os sacrum*. As far as our examination could be prosecuted in the living child, we are led to the belief that the lower portion of the spinal column is divided or cleft and there are two pelvic arches supporting the four limbs, which are situated upon the same plane.

Photographs of this infant have been made by the advice and under the supervision of one of our number.

The reality in this case surpasses expectation, and we are of the opinion that this interesting *living monstrosity* exceeds in its curious manifestation of the powers of nature in abnormal productions, the celebrated "Siamese Twins."

JOSEPH JONES, M. D.

Prof. of Phys. and Path., U. of Nashville.

PAUL F. EVE, M. D.

Prof. of Surg., University of Nashville.

Further remarks by Professors Jones and Eve, for this Journal:—Josephino Myrtle is the third offspring of W. H. and Nancy Corban, aged twenty-five and thirty-four, the wife being the senior by nine years. They are so much alike in appearance, having red hair, blue eyes, and very fair complexion, as to produce the impression of their being blood kin, which, however, is not the case. Mrs. Corban is from North Alabama, had borne one child to a former husband, the child having dark coloring, and resembling mostly the father, who had black hair and eyes. Her three children are all girls; the one already alluded to, now six years old, another three, and this *infant monstrosity*, now to be more minutely described, born the 12th of May, 1868, in Lincoln County, Tennessee, five weeks ago.

Mr. Corban is a Georgian, served in the Confederate army through the war, and was severely wounded in the right arm and left hand. The parents are in fair health, though the mother is *anaemic*. She recollects no fright or disturbance during her pregnancy. The presentation was fortunately the head, which accounts for the preservation of the life of the child. It would be curious to speculate on the trouble which might have been produced had the feet or breach presented, while the result, in all probability, would have proved fatal to the infant, and possibly to the mother. Mrs. Corban says that there was nothing peculiar in the labor or delivery. When three weeks old, the child weighed ten pounds. It now nurses healthily, is thriving well, and we

saw it urinate simultaneously, between the *two pairs of labia of the two vayinc*, situated about six inches apart. From the crown of the head to the *umbilicus* the child measures twelve inches, and from this point to the toes of the right and left external feet, eleven inches. From the *umbilicus* up, all is natural and well formed; all below this, extraordinary and unnatural. An inch below the navel is a mark of apparent failure for a second one. There are four distinct well developed, lower extremities. They exist in pairs on both sides of the median line which resembles the cleft of an ordinary pair of legs; but here there are no marks whatever of *anus* or *genital organs*, and upon pressure we discover no *os coccygis* or *saorum*. The outer legs of both sides are the most natural of the four, (though the foot of the right one is clubbed,) but are widely separated by the two supernumerary ones, which are less developed, except at their junction with the body, from which they taper to the feet and toes more diminutive and which are turned inwards. One toe is bifid on the left extra inward extremity. At birth these extra legs were folded flat upon the abdomen. We are led to believe that there are *two uteri as well as two recti*; in fact that the pelvic organs are double. Of course a minute dissection would alone expose the true condition of these parts.

Should this infant reach maturity and the internal generative organs be double, there is nothing to prevent conception on both sides. The first difficulty will, however, be in her walking. The outer, or external legs, may be used for progression; the inner or inturned ones, probably never. These might be successfully amputated at the knees, or higher up.

One of us recollects of being in London, in January, 1830, at an exhibition of the Siamese Twins, when Sir Astely Cooper gave an opinion adverse to an operation with a view to separate them, but which has always appeared to us feasible and without much risk of *peritonitis*; an operation, too, which should undoubtedly be performed in case of the death of one of them for no medical man believes in the vulgar impression that they must die simultaneously. In the present case all surgical interferences is, of course, out of the question, except that alluded to—removal of the extra lega.

Cases somewhat similar to the above have occurred and been described. Rokitansky refers to two completely distinct bodies conjoined at their *ossa sacra* or *coccyges*, as in

the well known Hungarian Sisters, Helens and Judith, born in 1701, who survived their twenty-second year.

Geoffrey St. Hilaire, alludes to cases of a trunk with two heads, some even Janus-like, having four upper and four lower extremities.

The case, however, recalled most vividly by Josephino Myrtle, is that of Rita-Christina, well known in Europe, and accurately described in this country years ago by Prof. Meigs. In this wonderful instance, there were two heads, two necks, four arms, but only two legs; and was thus the reverse of our case. From the *umbilicus* down, there was one well formed child, but above this all the organs were double; in reality there existed two beings. The *rectum* and bladder were common to both, but all else in the trunk was double and distinct. One would sleep while the other played, etc., for they had *two spinal marrows*, *two brains*, *two hearts*, but the last two occupied a common *pericardium*. Unfortunately, after surviving a little over a year, one sickened and died, when the other, then in health, instantly expired.

Rita and Christina were born in Sardinia, 1829, and described by Dr. De Michaelis, Professor of Surgery in the Royal University of Sassari, and lived eighteen months.

The late Prof. J. C. Warren, of Boston, first described the Siamese twin brothers, when purchased of their mother by Capt. Coffin and Mr. Hunter, (joint owners) and brought to that city, in 1829.—*Rich. and Louisville Med. Journal.*

[In the Museum of the Atlanta Medical College, can be seen, a well developed female child, having two distinct and well formed heads and necks. The two necks seem to unite at the upper portion of the dorsal spine; and the child has no other deformity in any respect.

The history of this very remarkable monster is not known by any one connected with the College. When deposited in the Museum, by Dr. J. Gilbert, of this city, some ten years since, the thoracic and abdominal cavities had been opened, and the child preserved perfectly in alcohol. No positive evidences of its having breathed, exist, but from appearances of the body it would not be unreasonable to suppose that it had lived several days after birth. Dr. G. obtained this body from persons professing to know nothing of its mother; and from their account of the circumstances under which it was found, in all probability the parent had deserted it in order to conceal the shame of illegitimacy.—Eis.]

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